



Examining service firms' brand strategies:

Identifying the relationships between
service innovation, organisation resources
and capabilities in achieving new service
performance

By

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Submitted in fulfilment of the requirements

for the Degree of Doctor of Philosophy

July 2015

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Acknowledgement

The writing of this dissertation has been one of the most significant academic challenges I have ever had to face. Without the support, patience and guidance of the following people, this study would not have been completed. It is to them that I owe my deepest gratitude.

First and foremost, I am especially grateful to Professor Aron O’Cass, my primary supervisor, for his guidance, understanding, patience, support, and enthusiasm. He always encouraged me to grow as an independent thinker who can effectively translate initial research ideas into theoretical sound and practically relevant research. His wisdom, knowledge and commitment to the highest standards inspired and motivated me. I am indebted to him for enlightening me the first glance of research.

Second, I would like to thank Dr. Phyra Sok, my co-supervisor for his guidance during my PhD, particularly in my last year of PhD, the important year for me. I thank him for his insightful comments. Furthermore, I thank Associate Professor Martin Grimmer, for his academic supports especially in the early stage of my PhD at University of Tasmania. I never forget his warm welcome to me to the University of Tasmania.

In addition, special acknowledgement is also given to the University of Tasmania for providing me the International Postgraduate Research Scholarship to undertake my PhD study. I also thank my fellow PhD candidates in the Marketing Discipline, Tasmanian School of Business and Economics, for the stimulating discussions, the companionship, and all the fun we have had. Moreover, I am

grateful to the companies that provided the data for this research. All the managers who participated in this research project with interest and enthusiasm.

Finally, my family were very much a part of this success. There are no words to express my gratitude to my parent's limitless patience, love, support, and encouragement. My mother, Zahra and my father, Reza, who gave me positive energy even from long distance and instilled in me the value of an education. The sacrifices they made for me laid the foundation for a strong future. They have always supported, encouraged and believed in me, in all my endeavours. I also thank all my sisters, Yasin, Samin, Saba and Soha for their support and encouragement as not only my sisters but as my best friends with their best supports.

The most importantly, I would like to thank my lovely husband Pejman, who I can never thank enough for his tireless emotional support, companionship, patience, love and tolerance during these years of my PhD life, without whom this effort would have been worth nothing. His love, support and constant patience have taught me so much about sacrifice and compromise. Thanks a lot for the sleepless nights that he was next to me before deadlines to help me to work on sorting pages, Tables, Figures and checking the references. He was always there cheering me up and stood by me through the good and bad times. I dedicated this thesis to my supervisors, my entire family, and in particular, my parents and my husband. My research would not have been possible without their helps.

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Abstract

In the increasingly competitive service industry, service innovation is an important driver of a service firm's success and survival. While service innovation has often been couched in the notion of new service development, there exists a lack of clarity regarding the extent that a service firm introduces a service innovation to the market through service branding. Achieving superior new service performance is a challenging task for managers, as they need to formulate an appropriate brand strategy that supports the pursuit of new service development, as well as deploy distinctive operational resources and capabilities to successfully implement brand strategy. Without the proper deployment of resources and capabilities, the translation of brand strategies into the superior new service performance-outcomes can be lost.

The primary objective of this study is to explore the role of brand strategies (i.e. new brand strategy and brand extension strategy) in the relationships between service innovations, market knowledge, market orientation, branding capability and new service performance. Specifically, this study focuses on the extent that service firms achieve higher new service performance when they deploy an appropriate service innovation (exploratory vs. exploitative service innovation) regarding their brand strategy type.

The current study seeks to offer four important contributions to the current literature. First, it will contribute to the literature by arguing that exploratory and exploitative service innovations are driven by specific market knowledge dimensions (market knowledge depth and breadth), regarding the type of brand

strategy (new brand strategy vs. brand extension strategy). This study shows that brand strategies moderate the relationship between market knowledge dimensions and service innovations.

Second, this study contributes to the literature by arguing that market orientation helps service firms to acquire and develop an appropriate market knowledge dimension regarding their brand strategy. It will show that brand strategies affect the relationship between market orientation and market knowledge depth and breadth. Third, this study contributes to the literature by arguing that users of both brand strategies benefit from applying the branding capability to increase new service performance.

Fourth, this study contributes to the literature by arguing that service innovations, specifically exploratory and exploitative service innovations, affect new service performance regarding the brand strategy type. It shows that brand strategy moderates the relationship between exploratory and exploitative service innovation and new service performance. In addition, this study contributes more generally to the literature by examining the interaction role of service innovations, market knowledge, market orientation, branding capability and brand strategies in the service context of Australia as a developed economy. Given the growing importance of the service industry in Australia, scant attention has been paid to the role of service branding in the service industry. Therefore, understanding the role of service branding in new service development in the service industry and extending the theory to new context is worthy of investigation.

Overall, the findings of this study reveal that service firms using new brand strategy need greater exploratory service innovation than exploitative service

innovation to achieve higher new service performance. In addition, new brand strategy users need greater market knowledge breadth than market knowledge depth to deploy exploratory service innovation. Furthermore, brand extension strategy users need greater market knowledge depth than market knowledge breadth to deploy exploitative service innovation. The findings of this study are contributing to the service branding literature, providing a fuller understanding of the extent to which service firms formulating new brand strategy or brand extension strategy need to understand and invest in appropriate service innovation, market knowledge dimensions, market orientation and branding capability in order to optimise the implementation of their brand strategy.

Chapter 1 – INTRODUCTION

1.1. Background

Intense international competition, rapid technological evolution, and increasing customer demands have produced unprecedented challenges in the service sector (Jaw, Lo, & Lin, 2010). The contribution of the services sector is significant in most countries (Schwab, 2011; Jaw et al., 2010) even those which have previously concentrated on manufacturing (Bitner & Brown, 2008; Ostrom et al., 2010). Accordingly, to maintain profitability and survive in increasingly competitive markets, service organisations need to frequently introduce new services (Jaw et al., 2010). As such, understanding competitive platforms related to how service firms introduce new services to be competitive is crucial.

In the service literature, service innovation, service branding and the resource-based view (RBV) have helped shaped our understanding of how service innovation and service branding lead to performance differentials between service firms (O’Cass & Ngo, 2011a). RBV suggests that a service firm’s resources and capabilities underpin its ability to achieve competitive advantage, and ultimately lead to its superior performance (e.g., Merrilees, Rundle-Thiele, & Lye, 2011; Yang, Marlow, & Lu, 2009; Lai, 2004). On the other hand, service branding theory suggests that a service firm’s branding capability and brand strategies - including new brand and brand extension strategies - underpin its ability to achieve customer satisfaction and therefore superior performance (O’Cass & Ngo, 2011a; Volckner et al., 2010). However, the interactive roles of brand strategies as well as

organisational resources and capabilities in new service development have been limited in the context of service innovation. As such, to better understand and address why some service firms outperform others, it is critical to take into account the key roles of brand strategies in the relationship between organisational resources and capabilities.

The argument raised here is that to achieve superior new service performance (i.e., customer attraction, satisfaction, and retention) through a successful service brand strategy implementation, managers need to deploy distinctive service innovation, organisational resources and capabilities. When service firms have specific characteristics or conditions, they need to implement specific service brand strategies. In other words, it is more beneficial for service firms to have a specific brand strategy that is supported by their specific organisational resources and capabilities.

The current study seeks to extend the literature by investigating the role of brand strategies and organisational resources and capabilities in service innovation. This chapter identifies topics of interest within the service branding and the service innovation literature, and covers the potential gaps, specific research questions, research objectives and contribution. It also offers justification of the study, identifies the methodological and analytical approaches adopted, introduces definitions and terms, outlines the structure of the study, and presents the delimitations of the study.

1.2. Research Gaps and Questions

This study argues that there are several major weaknesses in the theoretical and empirical development within the current literature – with respect to the roles of

service innovation, organisational resources, capabilities and brand strategies - that need to be addressed. *First*, due to the important role of innovation in organisations as a technological advance factor that reshapes the competitive landscape and creates new market opportunities, various approaches have been proposed to identify innovation drivers, such as firm size, firm autonomy (Olson, Walker, & Ruekert, 1995), product champions (Ettlie, Bridges, & O'Keefe, 1984), strategic orientation (Gatignon & Xuereb, 1997), organisational information flows and organisational memory (Moorman & Miner, 1997), service entrepreneurship (Salunke, Weerawardena, & McColl-Kennedy, 2013), and formal and informal hierarchical structure (Jansen, Van Den Bosch & Volberda, 2006). Among these different approaches, knowledge as an organisational resource has recently gained prominence. The basic premise of this approach is that new product creativity is primarily a function of the firm's ability to manage, maintain, and create knowledge (Grant, 1996; Luca & Atuahene-Gima, 2007; Zhou & Li, 2012).

Early studies on market knowledge tend to focus on how knowledge affects innovation in general (e.g., Bierly & Chakrabarti, 1996; Deeds & DeCarolis, 1999). However, more recent developments assert that a firm's market knowledge represents its most unique resource for radical innovation development (e.g., Hill & Rothaermel, 2003; Miller, Fern, & Cardinal, 2007; Subramaniam & Youndt, 2005; Zhou & Wu, 2010). Although the contributions of previous studies on the significant role of market knowledge dimensions in product innovation are substantial, extant research is lacking on the important role of different dimensions of market knowledge in service innovation.

Moreover, there is no insight into the relative importance of the different dimensions of market knowledge as drivers of service innovation in regard to

different brand strategy types. Given the strategic importance of market knowledge, an approach that considers its dimensions and parses out their distinct contributions seems appropriate if we are to examine how market knowledge matters in service innovation and service branding.

Previous studies have focused almost entirely on the effects of market knowledge (e.g., Atuahene-Gima 1995, 2005) on innovation outcomes. However, no detailed explanations have been offered on how service brand strategies affect the relationship between market knowledge and innovation. Since brand strategy is an important activity for enabling a clear vision about how resources can be employed to sustain a differential advantage (De Chernatony, Drury, & Segal-Horn, 2004) and branding is at the root of the firm's competitive advantage, understanding how market knowledge leads to service innovation outcomes through service branding may shed light on the importance of market knowledge.

The moderating view of service brand strategy proposed in this study suggests that both market knowledge dimensions (depth and breadth) are inherently valuable and service brand strategy determines the strength of their effect on service innovation. Until now, marketing theory has placed considerable weight on the value of market knowledge for effective product innovation, therefore examining these concepts and theories in respect of service innovation is particularly important in advancing this research stream. The findings of this study shed light on the level of importance researchers and managers need to place on the inherent value of both market knowledge dimensions and service innovation types regarding brand strategies. Based on the above discussion, the first research question is posed:

- *RQ 1: To what extent does the interaction between a service firm's brand strategy (new brand and brand extension) and market knowledge (depth and breadth) contribute to service innovation?*

To address this research question, the effects of market knowledge depth and breadth on exploratory and exploitative service innovations for new brand and brand extension strategy users will be examined. This study will argue that although both new brand and brand extension strategy users need market knowledge depth and breadth, new brand strategy users need higher market knowledge breadth to deploy higher exploratory service innovation, while brand extension strategy users need higher market knowledge depth to deploy exploitative service innovation.

Second, adding to the lack of scholarly focus on the effects of brand strategies on the relationship between market knowledge dimensions and innovation types, there have also been very few studies investigating the antecedents that help service firms acquire and develop superior market knowledge depth and breadth to deploy innovation. This study builds on the work of scholars such as Kohli & Jaworski (1990), exploring market orientation as a key antecedent driver of market knowledge. Because market orientation helps firms to understand and engage in the generation, dissemination, and response to market intelligence pertaining to current and future customer needs, competitor strategies and actions, channel requirements and abilities, and the broader business environment. All of these abilities and knowledge enable firms to effectively develop and acquire appropriate market knowledge that can be leveraged to deploy service innovation, thus achieving superior new service performance.

Furthermore, while previous research has mainly focused on the effect of market orientation and firm performance, the effect of market orientation on market knowledge dimensions in respect to the brand strategy types is still unknown. Therefore, based on the above discussion, a fundamental question can be raised.

- *RQ2: To what extent does a service firm's market orientation help it to acquire and develop market knowledge depth and breadth regarding the service firm's brand strategy?*

To address this research question, the effect of market orientation on market knowledge depth and breadth for new brand and brand extension strategy users will be examined. This study will argue that the effect of market orientation is greater on market knowledge breadth than market knowledge depth for new brand strategy users, while the effect of market orientation is greater on market knowledge depth than market knowledge breadth for brand extension strategy users.

Third, the theoretical frameworks offered in the branding literature have a tendency to conceptualise branding capability in terms of physical goods, with minimal emphasis on the branding capability of services (Merrilees et al., 2011, Altshuler & Tarnovskaya, 2010; Hsiao & Chen, 2013). The applicability of branding models to services could well be disputed on the grounds that marketing principles for goods and services possess inherent differences (Berry, 2000). According to Merz, He and Vargo (2009), services are characterised by their intangibility (lacking a tactile quality of goods), inseparability (simultaneously produced and consumed), heterogeneity (cannot be standardised), and perishability

(cannot be produced ahead of demand and inventoried) – which require that they be marketed somewhat differently from goods.

Moreover, while the contributions of previous research focusing on branding capability are significant in improving our understanding of firm performance, at present there has been limited attention given to the combined roles of branding capability and brand strategies in the competitive platforms of service firms in their pursuit of superior performance. Previous research in service branding has adopted the position that a firm's branding capability influences its performance (e.g., O'Cass & Ngo, 2011a). This study takes the view that while statistically an effect can be shown for the single effect of branding capability on performance, in reality branding capability combined with the suitable brand strategy will have a greater effect on new service performance. Based on the above discussion the third research question is posed.

- *RQ3: To what extent does the interaction between a service firm's branding capability and its brand strategy contribute to its new service performance?*

To address this research question, the effect of branding capability on new service performance for new brand and brand extension strategy users will be examined. This study will argue that both new brand strategy users and brand extension strategy users need branding capability to achieve new service performance when they launch a new service to the market. Specifically, new brand strategy users may need greater branding capability compared to brand extension strategy users due to the development of a new brand for the first time.

Fourth, scholars in service science (Ostrom et al, 2010) have identified service innovation and service branding as two research priorities. Although

research has been expanding beyond models and purposes narrowly focused on goods, the combined role of service innovation and service branding in models that can be applied to services is neglected in the literature. There is still a lack of clarity around the relationships between service branding and service innovation and their individual and combined contributions toward superior performance. This study will argue the view that the interaction between service innovation and service brand strategies can lead to stronger new service performance. Historically, research on innovation has followed a technological imperative by focussing on the assumption that manufacturing firms mainly organise their innovation efforts through R&D activities and have consequently focused on a narrow definition of product and process innovations associated with the R&D function in manufacturing organisations (Gallouj & Weinstein, 1997; Miles, 2001). While innovation in the manufacturing sector follows a technological trajectory, innovation in the service sector does not; and therefore, the prevailing logic of the generation of innovations in manufacturing organisations cannot be used to explain the adoption of innovations in service organisations (Damanpour, Walker, & Avellaneda, 2009). Thus, developing innovation models for the service industries is important (Barras, 1990; Gallouj & Weinstein, 1997; Miles, 2001; Bitner, et al., 2015). These issues lead us to the fourth research question.

- *RQ4: To what extent does the interaction between a service firm's service innovation and its brand strategy contribute to its new service performance?*

To address this research question, the effects of exploratory and exploitative service innovations on new service performance for new brand and brand extension strategy users will be examined. This study will argue that service firms using new

brand strategy achieve higher new service performance by deploying greater exploratory service innovation than exploitative service innovation. On the other hand, service firms using brand extension strategy achieve greater new service performance by deploying greater exploitative service innovation than exploratory service innovation.

1.3. Justification and significance of the study

This study advances our understanding of service innovation and new service performance linkage by challenging the traditional approach of examining the effect of innovation on overall firm performance in isolation. This study examines the combined roles of service innovation and service branding on new service performance outcomes. It proposes that exploratory service innovation is greater than exploitative service innovation on new service performance for new brand strategy users, while exploitative service innovation is greater than exploratory service innovation on new service performance for brand extension strategy users. It also addresses the concerns and the needs for conceptual integration of service innovation and service branding to better understand and fully explicate the roles of service innovation and service branding in explaining new service performance. This study is among the first to theoretically and empirically examine the effect of service innovation and service branding combination on new service performance.

Furthermore, this study proposes that brand strategies may increase the effect of branding capability on new service performance. The findings of this study provide empirical evidence for certain theoretical assumptions by scholars such as O'Cass and Ngo (2011) and Merrilees et al. (2011) and contribute to our

understanding that brand strategies, including new brand and brand extension will play a more significant role in achieving superior new service performance. This study is among the first to examine - theoretically and empirically - the effect of branding capability and brand strategy combination on new service performance.

Moreover, extending past research on market knowledge which sought to investigate the effect of market knowledge dimensions on driving innovation (e.g., Hill & Rothaermel, 2003; Miller et al., 2007; Subramaniam & Youndt, 2005; Zhou & Wu, 2010), this study argues that the presence of brand strategies in our modelling of service firm innovation would clarify the consequences and significance of relationships between market knowledge depth and breadth and exploratory and exploitative service innovation. The findings of this study provide additional insight into how a service firm can enhance the relationship between market knowledge dimensions and service innovations through the possession of brand strategies.

Finally yet importantly, this study identifies market orientation as an antecedent that enables service firms to develop market knowledge depth and breadth regarding to their brand strategy type. This approach contributes to the current literature by providing empirical support for the important role of market orientation on the ability to develop relevant market knowledge in implementing brand strategy.

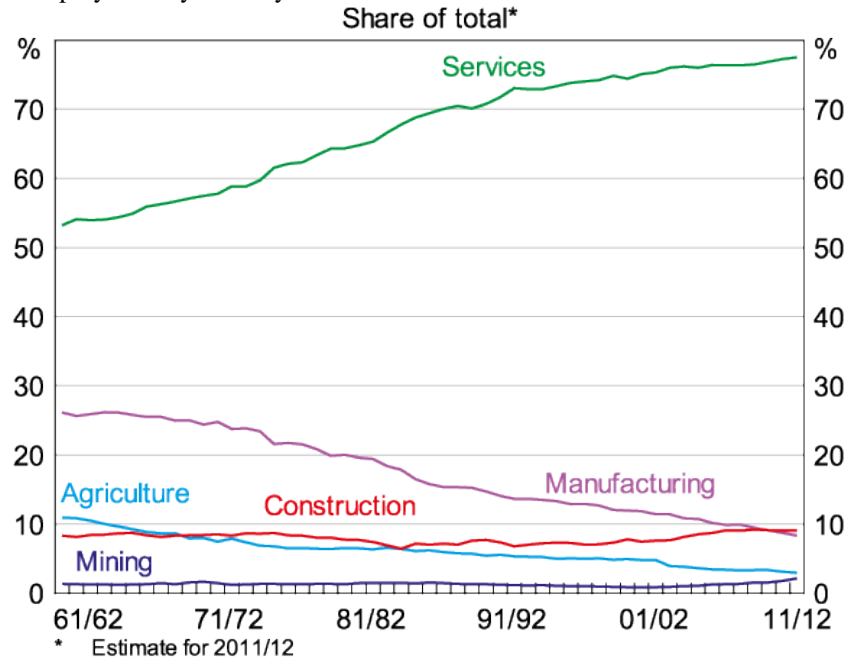
Overall, the unified framework incorporating exploratory and exploitative service innovations, service branding and RBV proposed in this study suggests that synchronised interactions between service innovation, brand strategies and organisational resources and capabilities enable a service firm to achieve higher

new service performance. This contribution is premised on the view that the effective translation of brand strategies into new service performance can be lost without attention to organisational resources and capabilities.

The potential benefits to the Australian service industry from this study are significant. In common with most advanced economies, Australia is a world-class provider of a range of services, such as telecommunications, travel, banking and insurance. The services sector is a major component of the Australian economy, representing about 70 percent of Australia's Gross Domestic Product, and employing nearly four out of five Australians (Department of Foreign Affairs and Trade, 2015).

Over the past half a century, one of the most significant changes has been the growth of the services sector, whose share of both output and employment has increased steadily. In 1960, for example, only about 50 percent of the workforce in Australia was employed in the services sector. Today, the figure is over 75 percent (Figure 1-1). On the other hand, the share of manufacturing and of agriculture has declined steadily. The most significant reason of these changes is that the demand for services has increased faster than the demand for goods. In addition, most services are produced domestically rather than imported. These factors have similarly influenced all other advanced economies (Lowe, 2012).

Figure 1-1 Employment by industry



Source: Lowe (2012)

1.4. Research method

This study adopted a descriptive research approach, collecting primary data via a web-based survey. Senior managers who were the most knowledgeable about their service firm's brand strategy and its resources and capabilities were targeted as survey candidates. The sampling frame involved 1500 medium and large service firms across a range of different service sectors in Australia were selected from the IncNet Business Database. Due to limited budget to buy a list of all service firms in Australia, a list of 1500 service firms was ordered. To obtain a list of 1500 service firms, the list provider identified all medium and large service firms that have more than 20 employees (Australian Bureau of Statistic, 2001) and are located in NSW or Victoria. Sampling was implemented by selecting every eleventh service firm in the alphabetically sorted list (Sok & O'Cass, 2011) from the IncNet Business Database until 1500 were identified. Due to the estimated low response

rate for online surveys (e.g., O'Cass & Ngo, 2011), all 1500 service firms in the sample list were invited to participate. Initial contact and follow-up were done via telephone and email respectively to invite and then confirm agreement for participation in this study.

Following the initial contact with 1500 service firms, 210 service firms from the sample list agreed to participate in the study. However, 55 of these firms were subsequently omitted from the sample due to not meeting the study selection criteria (not introducing at least one new service to the market in the past three years). The link to the web-based survey was emailed to the CEOs of the 155 service firms who agreed to participate in this study and met the selection criteria and subsequently, , 128 usable surveys were obtained and prepared for data analysis.

This study adopted the two-stage procedure suggested by Churchill (1979) to develop and refine measures for constructs of interest. The first stage focused on item generation, format and scale poles, and earlier development of the definition of constructs and self- assessments of their content validity. The second stage pertained to refinement by conducting an expert judgment evaluation of face validity and a pre-test via interviews with five experts in marketing. Following this procedure, the final survey was prepared in Survey Monkey.

1.5. Definitions of terms

In order to establish an understanding of the research model that underpins this study, Table 1-1 presents the definitions of key terms and constructs. These definitions are based on the related studies in marketing and branding literature.

Table 1-1 Definition of terms

Term	Definition
Market orientation-MO Culture	The corporate culture that places the highest priority on creating and maintaining superior customer value (Slater & Narver, 1998; Zhou, Li, Zhou, & Su, 2008).
Market knowledge depth	The level of sophistication and complexity of a service firm's knowledge of its customers and competitors (Prabhu, Chandy, & Ellis, 2005; McEvily & Chakravarthy, 2002; Luca & Atuahene-Gima, 2007).
Market knowledge breadth	A service firm's understanding of the number of different knowledge domains and wide range of diverse customer and competitor characteristics with which a service firm is familiar (Bierly & Chakrabarti, 1996; Prabhu, Chandy, & Ellis, 2005; Luca & Atuahene-Gima, 2007).
Exploratory service innovation	Radical innovations which are designed to meet the needs of new and emerging customers or new markets (Benner & Tushman, 2003; Danneels, 2002; Jansen, et al., 2006).
Exploitative service innovation	Incremental innovations which are designed to meet the needs of existing customers or existing markets (Benner & Tushman, 2003; Danneels, 2002; Jansen et al., 2006).
Branding capability	A service firm's ability to create, sustain and grow reputational brand assets (Vorhies, Orr, & Bush, 2011).
New brand strategy	A service firm's brand strategy for introducing a new service under a new brand name to a new market (Ambler & Styles, 1996).
Brand extension strategy	A service firm's brand strategy for introducing a new service under an existing brand name to the existing market (Ambler & Styles, 1996).
New service performance	"The project characteristics that distinguish successful and unsuccessful initiatives" (Melton & Hartline, 2010, p 412).

1.6. Research Delimitations

This section introduces the delimitations of this study in order to clearly acknowledge the boundaries within which it has been conducted. There are several delimitations regarding the extent to which the result of this study can be generalised with care. *First*, the empirical data were collected from service firms across a variety service sectors. *Second*, empirical data were collected from medium and large service firms. *Third*, the empirical data of this study were

collected from single informants from each service firm. Finally, the study is limited in regional scope, with the sample being generated from service firms operating within two states (Victoria and New South Wales) in Australia.

1.7. Outline of the dissertation

This dissertation contains six chapters building on the structure and guidelines provided by Perry (1998). Chapter 1 introduces the contextual background and overview of the study, identifies the topic of interest and covers the potential contribution, research objectives and specific research questions. It also offers justification of the study, identifies the methodological and analytical approaches adopted, introduces definitions and terms, outlines the structure of the study, and presents delimitations of the study.

Chapter 2 presents a detailed review of the literature related to the topic of interest, thus providing a backdrop for theory building. Specifically, the literature related to service branding is reviewed with emphasis on the research in investigating the nature and outcomes of service branding.

Chapter 3 develops the framework of the study. It places emphasis on addressing and connecting essential constructs, including new service performance, exploratory and exploitative service innovations, market knowledge depth, market knowledge breadth, market orientation, branding capability, and brand strategies, including new brand and brand extension strategies. Hypotheses are developed from the literature to test the theory behind them.

Chapter 4 describes the selection criteria and the foundation of the research design, which serves as a detailed blueprint that guides the implementation of the research. This takes place via a systematic discussion followed by the presentation

of a research paradigm, the data collection method, sampling plan, survey instrument, measure development, scaling and anticipated data analysis techniques.

Chapter 5 presents the findings from the collected data. This chapter begins with an outline of the findings derived from the preliminary analysis, including the profile of the sample, followed by a discussion of data preparation procedures and the results of hypotheses testing.

Chapter 6 undertakes a discussion and explanation of study findings in detail. Theoretical and practical implications, limitations of the study and recommendations for future researches are also covered. Finally, this study closes with a list of references and a body of appendices.

1.8. Conclusion

This chapter has provided an overview of the thesis. Key topics in the relevant literature, including service branding and service innovation and the limitation in the current literature were provided to introduce the topic. The potential contribution to both theory and practice was discussed along with research objectives and specific research questions. The significance of this study was then justified from both theoretical and practical perspectives. Following the study background and research questions, discussion on research methodology and research methods constituting a blueprint of conducting the study was provided. The constructs of interest related to this study's theoretical framework also were identified as were definitions for each key construct. Finally, delimitations, and the outline of this study were set out.

Chapter 2 - LITERATURE REVIEW

2.1. Introduction

Service firms need innovation in their services that create long-term growth and prosperity, enabling them to survive in a highly competitive environment. Two specific forms of innovation have been identified within the marketing literature: exploratory and exploitative innovations (Quintana-García & Benavides-Velasco, 2008; Jansen et al., 2006). Exploratory and exploitative innovations have been identified as critical determinants of market success and as requiring careful management during new service development (Sok & O'Cass, 2011).

Typically, the introduction of a new product or service to the market happens through brand strategies (e.g., new brand and brand extension strategies) (Tauber, 1981; Ambler & Styles, 1996). Moreover to develop service innovations, service firms need to deploy appropriate organisational resources and capabilities. The availability of appropriate organisational resources and capabilities (such as market knowledge and branding capability) can enhance a firm's ability to learn more about customer's needs and wants and provide appropriate support to innovation activities (Nohria & Gulati, 1996; Grant, 1996). Furthermore, it has been asserted that market knowledge is deeply rooted in the market orientation (Luca & Atuahene-Gima, 2007).

Thus, this study gives consideration to service innovation, service branding and organisational resources and capabilities that affect the success of a new service. In this chapter, the literature of service innovation, service branding,

resource based view and capability theory is reviewed. Specifically, this chapter focuses on two forms of service innovation - exploratory and exploitative service innovation - as well as two forms of brand strategies - new brand and brand extension strategies.

2.2. New Service and Service Innovation

2.2.1. Innovation Overview

Service innovation is a broad concept that encompasses a considerable number of distinct dimensions (e.g., Bessant & Davies, 2007; De Jong & Vermeulen, 2003; Edvardsson et al., 2013; Tidd, Bessant, & Pavitt 2005). The innovation literature generally presents various conceptual typologies of innovation types with particular characteristics that are not affected identically by environmental and organisational factors (Jansen et al., 2006; Kimberly & Evanisko, 1981; Light, 1998). Generally, scholars classify innovations based on two dimensions: (1) their proximity to the current technological trajectory and (2) their proximity to the existing customer and market segment (Abernathy & Clark, 1985).

On the technological dimension, innovation types are different in determinants and organisational effects (Morone, 1993; Tushman & Smith, 2002). It has been argued that incremental innovation consists of small changes in a technological trajectory and builds on the firm's current technical capabilities, while radical innovation basically changes the technological trajectory and is associated with organisational competencies Dosi (1982) and Green, Gavin, and Smith (1995) . Some scholars classify innovation by how it affects existing subsystems and/or linking technologies (e.g., Baldwin & Clark, 2000; Henderson & Clark 1990; Tushman & Murmann, 1998). Henderson and Clark (1990) and

Jansiti and Clark (1994) assert that modular innovations affect subsystem or component technology, leaving linking mechanisms intact, while architectural innovations involve changes in how the subsystems are linked together. Innovations are also defined by Christensen and Bower (1996) in terms of whether they address the needs of existing customers or are designed for new or emergent markets. Products and services designed for new customers and new markets often require substantial departure from existing firm activities. These innovations, like radical technological innovations, create organisational challenges for managers. Radical innovations or those innovations for emergent customers or markets are explorative, which require new knowledge or a departure from existing skills. In contrast, incremental technological innovations and innovations designed to meet the needs of existing customers are exploitative and build upon existing organisational knowledge (Levinthal & March, 1993; March, 1991).

The classification of types of innovation as exploratory and exploitative is also widely used by theorists in organisational learning (e.g. March, 1991; Auh & Menguc, 2005). Furthermore, scholars in marketing and management use concepts of exploratory innovation and exploitative innovation in different levels of analysis (e.g., Benner & Tushman, 2003; Danneels, 2002; Jansen et al., 2006). These two concepts require different structures, processes, strategies, capabilities and cultures, and have different impacts on an organisation performance (Li et al., 2008). Following the work of March (1991), many researchers have studied the notion of exploitation and exploration from different perspectives. A detailed review of exploratory and exploitative service innovation is presented in the following section.

2.2.2. Exploratory and exploitative service innovation

Concepts of exploratory and exploitative service innovations have been used to explain how some service organisations outperform others (Jansen et al., 2006). Since scholars conduct research at different levels of analysis, they present the notion of exploration and exploitation differently. At the *individual level*, for example, Audia and Goncalo (2007) considered exploration and exploitation as two different types of creative idea generation. At the *project level*, the degree of exploration and exploitation relates to the newness of a project (McGrath, 2001; Perretti & Negro, 2007). At the *firm level*, scholars describe exploration as distant knowledge search and exploitation as proximate knowledge search (Benner & Tushman, 2002; Katila & Ahuja, 2002; Nerkar & Roberts, 2004; Sidhu, Commandeur & Volberda, 2007). At the *corporate level*, exploration and exploitation are seen as corporate strategy for venturing (Cantwell & Mudambi, 2005; Vanhaverbeke & Peeters, 2005). At the *alliances level*, exploration and exploitation are viewed as potential motivations to enter into collaboration between firms (Hagedoorn & Duysters, 2002; Rothaermel & Deeds, 2004; Rothaermel, Hagedoorn & Roijakkers, 2004). At the *industry level*, exploitation and exploration build upon each other and form a dynamic ‘cycle of discovery’ (Gilsing & Nooteboom, 2006).

Since the majority of scholarly papers consider exploration and exploitation at the firm level, the substantial differences in the definition and interpretation of exploration and exploitation in the literature at the firm level will be discussed here. Although there is general agreement among scholars that, at the firm level, exploration is the search for new knowledge, technology, competences, markets or relations, and exploitation is the expansion and development of existing ones, there

has been a wide variety of interpretations of these constructs within the literature. As Li et al. (2008) suggested, the definition and interpretation of exploration and exploitation in the literature can be classified into three domains. First, the definition of exploration and exploitation are based on the type of learning, in that exploration and exploitation are linked to the functions in science, technology and market. Second, the definition of exploration and exploitation are based on the amount of learning, in that they are interpreted in terms of different dimensions of knowledge search. Finally, the definitions of exploration and exploitation are considered as innovation processes or innovation outcomes. These definitions are explored further in the following sections.

Exploration and exploitation as the type of learning in science, technology and market: Some scholars see exploration and exploitation as different types of learning. In this sense, exploration is explained with terms such as search, variation, risk taking, experimentation and discovery, while exploitation is explained as refinement, production, efficiency, selection, implementation and execution (March, 1991). These two types of learning correlate to particular organisational functions.

Some researchers distinguish exploration from exploitation by highlighting the distinction between science and technology (Geiger & Makri, 2006). Science is associated with essential search, which is exploratory and is conducted without any practical solution while technology search is associated with applied research, which is exploitative and is often driven by the motivation of solving a particular practical problem (Fleming & Sorenson, 2004). Thus, some scholars argue that the uncertain science search is exploration, and the technology research is exploitation (Ahuja & Katila, 2004; Geiger & Makri, 2006). For instance, with respect to R&D

projects, Garcia, Calantone and Levine (2003) define research projects as exploration and development projects as exploitation.

Nevertheless, Von Hippel (1994), and Chesbrough and Rosenbloom (2002) argue that the search for science and technology is not sufficient to achieve successful innovations. A successful innovation also needs searching for product market knowledge gained from customers, suppliers and even competitors as a complementary source of scientific and technological knowledge. Jayanthi and Sinha (1998) define exploration as the technology search that aims at meeting future market demand, and exploitation as the technology search that aims at meeting current market demand. Lavie and Rosenkopf (2006) also argued that for each pair of functions, i.e., science vs. technology and technology vs. product market knowledge, the earlier function is exploration, while further exploitation takes places in the following function.

Exploration and exploitation as the amount of learning (knowledge search):

While organisational functional domain is one way to interpret exploration and exploitation in terms of the type of learning, most studies employ the idea of local or distant knowledge search to explain the concepts of exploration and exploitation. Scholars such as Ahuja and Lampert (2001), Rosenkopf and Nerkar (2001), Benner and Tushman (2002), Katila and Ahuja (2002), and Nerkar (2003) describe exploitation as a set of activities that search for familiar, mature, current or proximate knowledge; and exploration as a set of activities that search for unfamiliar, distant and remote knowledge. Particularly, in technological innovation, exploitation involves local search that builds on a firm's existing technological capabilities, while exploration involves the more distant search for new capabilities. Local search provides a firm with advantages in making incremental innovations,

while distant search might bring opportunities for a firm to achieve radical innovations (Nerkar & Roberts, 2004). Ahuja and Lampert (2001) define exploration and exploitation based on the degree of novelty of the technology that a firm searches. Thus, the ‘new to the world’ is most exploratory and ‘new to the firm only’ is least exploratory. Rosenkopf and Nerkar (2001) use another interpretation of exploration and exploitation based on a search for new technology within or outside the organisational boundary or technology field. In this sense, exploration is seen as technology search in a new technology field outside the firm and exploitation is the search in the existing technology field within the firm.

Phene, Fladmoe-Lindquist and Marsh (2006) offer yet another interpretation by distinguishing knowledge sources between ‘international’ and ‘national’ origin. They argue that the search for proximate technology from a national origin is exploitation, and the search for distant technology from an international origin is explorative. Overall, from the knowledge search perspective, exploration and exploitation are defined according to the knowledge distance between the new knowledge and the existing knowledge, in other words, to search locally is exploitation and to search distantly is exploration.

Exploration and exploitation as an innovation process vs. innovation outcome: Other studies employ the idea of the innovation process or the innovative outcome to interpret exploration and exploitation. Some researchers investigate exploration and exploitation in terms of the innovation process, which involves learning activities, behaviour, investment and strategies (e.g., Jayanthi & Sinha, 1998; Nerkar, 2003; He & Wong, 2004; Nerkar & Roberts, 2004; Van Looy, Martens & Debackere, 2005; Phene et al., 2006; Sidhu et al., 2007). These

researchers designate exploration and exploitation as different forms of the learning process through which innovations come forth.

Some other scholars associate exploration and exploitation directly with innovation outcomes, which are the products or services resulting from the innovation (Dowell & Swaminathan, 2006; Jansen et al., 2006; Greve, 2007). In such cases, exploration and exploitation are usually used synonymously with ‘radical innovation’ and ‘incremental innovation’ respectively (Benner & Tushman, 2003; Jansen et al., 2006). Jansen et al. (2006) explain that exploratory innovation is radical innovation and is designed to meet the needs of emerging customers or markets. Exploratory innovation offers new designs, creates new markets, develops new channels of distribution and requires new knowledge or departures from existing knowledge.

On the other hand, it has been argued that exploitative innovation is incremental and is designed to meet the needs of existing customers or markets. It can broaden existing knowledge and skills, improve established designs, expand existing products and services, increase the efficiency of existing distribution channels, is built on existing knowledge, and can reinforce existing skills, processes, and structures (Jansen et al., 2006). According to Atuahene-Gima (2005, p. 62), exploration refers to the “...tendency of an organisation to invest resources to acquire entirely new knowledge, skills, and process...” whereas exploitation is “...the tendency of an organisation to invest resources to refine and extend its existing product innovation knowledge, skills, and processes”. Faems, Van Looy and Debackere (2005) also provide empirical evidence that exploitative collaboration with suppliers and customers has a positive impact on incremental

innovation, while explorative collaboration with research institutes has a positive impact on radical innovation.

Exploration and exploitation as strategy: He and Wong (2004) define exploratory technological innovation strategy as the firm's emphasis on existing new product-market domains, while exploitative technological innovation strategy is defined as the firm's emphasis on improving existing product-market positions. Further, Kyriakopoulos and Moorman (2004) conceptualise exploratory marketing as a strategy that primarily involves challenging the market, and exploitative marketing as a strategy that primarily involves improving and refining current skills and procedures associated with existing marketing strategies. The literature has been focused mainly on exploratory and exploitative strategies in marketing, innovation or technological areas (e.g., He & Wong, 2004; Cao, Gedajlovic, & Zhang, 2009; Sirén, Kohtamäki, & Kuckertz, 2012). However to date, there has been a lack of conceptualisation of exploratory and exploitative strategies in relation to branding.

According to Siren et al. (2012), exploratory strategy designates a firm's emphasis on exploring new technologies to create innovative products, searching for innovative ways to satisfy customer needs, and venturing into new markets or targeting new customer groups. They define exploitative strategy as a firm's emphasis on the commitment to improving quality and reducing costs, continuing the search to improve product quality, effort toward increasing the automation of operations, and monitoring of the satisfaction of existing customers.

Siren et al. (2012) argue that exploratory and exploitative strategies will not influence firm performance, unless specific resources and capabilities are

developed and deployed that provide the capacity to implement these strategies. This argument is supported by the literature on strategy implementation which asserts that firm strategies have an indirect effect on firm performance via the deployment of specific resources and capabilities (Slater & Olson, 2001; Love, Priem, & Lumpkin, 2002; Homburg, Krohmer, & Workman, 2004; Desarbo, Di Benedetto, & Song, 2007; Olson, Slater, & Hult, 2005; Vorhies et al., 2009; Hughes et al., 2010). However, the current literature on strategy implementation also argues that corporate strategies are path dependent in their respective capabilities (DeSarbo et al., 2005). For instance, DeSarbo et al. (2005) suggest that different strategic types (i.e., prospectors, analysers, defenders) affect technological, marketing, management, and information technology capabilities differently. This highlights that there is a lack of clarity regarding the extent that exploratory and exploitative strategies affect the performance of a firm, a business-unit, or a new product/ service according to and/or limited by the contributions of various types of organisational resources and capabilities.

To summarise, the various definitions of exploration and exploitation lie predominantly on the value chain functional perspective, the knowledge distance perspective, the innovation process viewpoint and the innovative outcome viewpoint. It seems unlikely that we can achieve a unified definition of exploration and exploitation that suits all contexts. The recent work on exploratory and exploitative service innovation by Jansen et al. (2006) and Jansen, Simsek, and Cao (2012) argue for the positive effects of exploratory and exploitative service innovation on financial performance. Jansen et al. (2006) also argue that exploratory and exploitative service innovation are important drivers of firm performance, and the firm's ability to pursue and develop them must be recognised.

There are various studies on the drivers of service innovation in the literature, such as formal hierarchical structure (Jansen et al., 2006). A numbers of studies on drivers of innovation are based on the resource based view (RBV) which holds that organisational resources and capabilities are the key drivers of innovation. RBV emphasises the value of integrating internal resources and capabilities in order to gain distinctive competencies and sustained high performance. Organisational performance is enhanced by the synergistic use of the organisation's internal resources, leading to continuous adoption of multiple types of innovation (MacDuffie, 1995; Pablo et al., 2007). This study builds on RBV theory and is predicated on the notion of market knowledge as a driver of innovation exploration and exploitation. In the following section, a review of RBV literature relevant to this study is presented.

2.3. Resource Based View Theory

2.3.1. Introduction

In recent years, RBV has become one of the most influential frameworks in the strategic management literature. RBV takes an 'inside-out' perspective to offer explanations for firm success or failure (Dicksen, 1996). RBV originates from *The Theory of the Growth of the Firm* by Edith T. Penrose, first published in 1959, which describes the firm as a bundle of resources and posits that management search for the best use of available resources leads to the firm's growth. Subsequently, Rumelt (1984) and Wernerfelt (1984) advanced RBV by arguing that the internal development of resources, the nature of those resources, and different methods of employing resources are related to profitability. Barney (1991) formalised the description of this notion, stating that resources include

assets, capabilities, processes, attributes, knowledge and know-how that are possessed by a firm, and that these can be used to formulate and implement competitive strategies. RBV relies on two fundamental assertions, that of resource heterogeneity (resources and capabilities possessed by firms may differ), and of resource immobility (these differences may be long lasting) (Mata, Fuerst & Barney, 1995). Heterogeneity is the required condition for obtaining at least temporary competitive advantage. Resource immobility is the required condition for sustained competitive advantage, since competitors would face cost disadvantage in obtaining, developing, and using it compared to the firm that already possesses it. RBV literature primarily investigates how organisational resources and capabilities lead to differences in the performance outcomes of firms (e.g., Zahra et al., 2006; Ketchen, Hult, & Slater, 2007; Crook et al., 2008; Villanueva, Van de Ven, & Sapienza, 2012).

Critics of the RBV assert that broad conceptualisations about firm resources ignore important differences in firm assets and firm abilities (Priem & Butler, 2001). Consequently, scholars began to distinguish between firm resources and firm capabilities (Helfat & Peteraf, 2003). A resource is a tangible or intangible asset, and can be valued and traded, such as a brand, a patent, a parcel of land, or a license. Individual employee skills are also resources (Lieberman and Montgomery, 1998). “Resources are converted into final products or services by using a wide range of other firm assets and bonding mechanisms” (Amit and Schoemaker, 1993, p. 35). On the other hand, capabilities are “...a firm's capacity to deploy organisational resource using organizational processes, to effect a desired end” (Amit and Schoemaker, 1993, p. 35). A capability is intangible; firms cannot quantify (i.e., “value”) their capabilities. A capability is a firm's capacity to

undertake a specific activity (Hoopes et al., 2003; Lieberman & Montgomery, 1998; Sok & O’Cass, 2011).

According to the above discussion distinguishing between resource and capabilities, there are three streams of research in RBV. The first group of scholars believes that it is the organisational resources that drive performance (e.g., Crook et al., 2008; Villanueva et al., 2012), while the second group takes the view that it is the organisational capabilities that show performance differentials between firms (e.g., Sapienza et al., 2006; Zahra et al., 2006; Ketchen et al., 2007). More recently, Sok and O’Cass (2011) asserted that it is the combination of resources and capabilities that drives performance. A detailed review of these research streams is presented in the following sections.

2.3.2. Resources stream

Research stream one within RBV argues that organisational resources create competitive advantages (e.g., Barney, 1991; Crook et al., 2008; Villanueva et al., 2012). According to this view, resources are tangible or intangible (e.g., Grant, 1996; Galberth, 2005; Vorhies et al., 2009; Sok & O’Cass, 2011). Tangible resources are assets such as financial instruments, machinery, and equipment that can be quantified and valued in financial terms. Intangible resources on the other hand, are assets such as patents, trademarks, and reputation and skills, such as knowledge and capabilities which cannot be precisely quantified or valued financially. Scholars within this stream conceptualise resource assets and capability assets as one and the same for the purposes of understanding performance differentials between firms. Therefore, within this stream resources and capabilities are treated in the same way (Sok & O’Cass, 2011).

2.3.3. Capabilities stream

Some scholars within research stream two of RBV assert that resources are static (Priem & Butler, 2001) and have no value in isolation (Ketchen et al., 2007). Therefore, firms need capabilities to deploy resources in achieving performance differentials (e.g., Ketchen et al., 2007; Vorhies et al., 2009; Sok & O'Cass, 2011). In this stream, scholars view the firm's capabilities as a vital factor in driving performance (e.g., Keteche et al., 2007; Vorhies et al., 2009).

2.3.4 Resource-Capability Combination stream

Newbert (2008) asserts that to be effective, organisational resources and capabilities must be deployed in combinations. In this sense, he views resources as the firm's assets, and capabilities as the means of deploying those resources. Sok and O'Cass (2011) extend Newbert's work (2008) by arguing that both resources and capabilities must be possessed by firms at high levels in order to achieve superior performance. They discuss the notion that firms with extensive resources, but poor capabilities to deploy their resources, can fail to achieve superior performance.

Generally, researchers within all three streams of RBV research outlined above, endeavour to examine the linkages between different types of resources and capabilities such as firm market knowledge, branding capability, marketing capability and others. Of all identified organisational resources and capabilities, this study concentrates on market knowledge and market orientation as important resources and branding capability as a significant capability in new service development. The concepts associated with these organisational resources and capabilities is explored in the next three sections.

2.3.5. Market knowledge

Increasing global competition has put tremendous pressure on firms to incorporate not only innovation as integral part of their corporate, but also market knowledge. It has been argued that market knowledge is a key index in innovation performance (e.g., Atuahene-Gima, 1995, 2005; Day, 1994; Li & Calantone, 1998). Market knowledge refers to the firm's knowledge about its customers and competitors (e.g., Day, 1994; Kohli & Jaworski, 1990; Narver & Slater, 1990). Knowledge is an intangible asset that has been classified and described in a variety of ways (e.g., Hedlund, 1994; Huber, 1991; Nonaka & Takeuchi, 1995; Spender, 1996). Birkinshaw, Nobel, and Ridderstrale (2002) describe knowledge as a firm-level construct, focusing on the firm's knowledge assets, which include technology, human capital, patents, brands, and organisational routines. Information about the market environment, mainly about customers and competitors, is the source of stimulation for the firm's knowledge (Day, 1994; Nonaka, 1994) and the driver of a market-oriented strategy (Day & Nedungadi, 1994). This implies that a firm that correctly identifies, collects, and uses information about customer and competitor conditions is deemed knowledgeable about its market.

Knowledge about technology and other environmental properties is also important, but only to the extent that it enhances the understanding of customers' and competitors' behaviour. Zhou, Li, Zhou, and Su (2008) describe market knowledge as the firm's knowledge of its customers' behaviours and needs as well as its competitors' behaviour. The firm's market knowledge has been broadly conceptualised into four dimensions; breadth, depth, tacitness, and specificity which may contribute differently to firm's outcome (Luca & Atuahene-Gima,

2007) and may give managers varying degrees of direction and flexibility in their approach to reducing internal or external pressures.

This study focuses on two dimensions of market knowledge - breadth and depth. Market knowledge breadth refers to the number of different knowledge domains with which the firm is familiar (Bierly & Chakrabarti, 1996). Prabhu, et al. (2005) propose a similar view, referring to knowledge breadth as the variety of fields over which the firm has familiarity. Zhou et al. (2008) define market knowledge breadth as the firm's understanding of a broad range of customer and competitor types and factors that explain them. In other words, a firm is said to have broad market knowledge if it has knowledge of a broad variety of existing and possible customer segments and competitors and also uses a various set of parameters associated with customers (e.g., needs, behaviours, characteristics) and competitors (e.g., products, markets, strategies) to describe and evaluate them (e.g., Zahra, Ireland, & Hitt, 2000). Firms with a broad market knowledge have greater potential to recombine different elements of that knowledge in order to improve opportunity recognition and creative potential (Kogut & Zander, 1993).

Prabhu et al. (2005) define technical knowledge depth as the amount of within-field knowledge that the firm possesses. Whereas, Zhou et al. (2008) define market knowledge depth as the level of sophistication and complexity of a firm's knowledge of its customers and competitors. This perspective captures the level of refinement and detail with which the firm is able to connect the unique and interdependent relationships among the factors that describe key issues about customers and competitors. Comprehensive knowledge of the interdependence between elements - such as customers' needs, behaviours, and preferences and competitors' products and strategies - indicates that a firm has a deep

understanding of its market. Thus, breadth captures the horizontal dimension of knowledge, whereas depth captures the vertical dimension.

Market knowledge has been applied within a number of research domains. A number of scholars have argued that market knowledge is the prerequisite of firm performance (e.g., Luca & Atuahene-Gima, 2007; Wiklund & Shepherd, 2003), and that it plays a critical role in assisting firms to achieve a new product advantage (Li & Calantone, 1998), radical innovation (Zhou & Li, 2012) internationalization (Zhou, 2007) and knowledge integration mechanisms (KIMs) (Luca & Atuahene-Gima, 2007). Significantly, scholars have consistently sought responses from either chief executive officers or a senior marketing manager or both to measure market knowledge dimensions (e.g., Li & Calantone, 1998; Luca & Atuahene-Gima, 2007; Zhou & Li, 2012; Wiklund & Shepherd, 2003; Zhou, 2007).

Generally speaking, current research views market knowledge as the fundamental driver of service and product innovation performance (Atuahene-Gima 1995, 2005; Li & Calantone, 1998; Moorman & Miner, 1997). This literature review, establishes a solid foundation for the further discussion to be found in Chapter 3 about the role of market knowledge as a driver of service innovations.

2.3.6. Branding capability

Branding capability has recently come to the attention of scholars working in RBV domain. Scholars suggest that - to an appropriate value - firms should build and nurture a level of branding capability that restricts competitive forces (O'Cass & Ngo, 2011).

As will be discussed in Section 3.1 below, this study takes the view that branding capability is a critical antecedent that enables firms to effectively and

efficiently develop the service innovations needed to compete successfully in the marketplace. Within the branding literature, two popular terms have emerged and been used interchangeably, branding orientation (e.g., Urde, Baumgarth, & Merrilees, 2013; Ratnatunga & Ewing, 2009) and branding capability.

Branding orientation has been frequently erroneously described as “...an approach in which the process of the organisation revolve around the creation, development, and protection of brand identity in an ongoing interaction with target customers with the aim of achieving lasting competitive advantages in the form of brands” (Urde, 1999; p. 119). This orientation is relevant for describing companies that strive not only to satisfy customer needs and wants, but also to achieve a strategic advantage from brands. Brand orientation becomes the driving force for brand-oriented firms that consider branding as a significant issue in all their business decisions and directions. It emphasises the deployment of the marketing mix and human resources to deliver a distinctive brand in the customers’ minds (Wong & Bill, 2005).

Branding capability, on the other hand, is conceptualised as a firm’s capacity to mobilise a bundle of interrelated organisational routines to performing branding activities such as communication, pricing, and distribution of a service brand (O’Cass & Ngo, 2011). Similarly, Morgan, Slotegraaf, and Vorhies (2009) use the term “brand management capability” which reflects the ability not only to create and maintain high levels of brand equity, but also to deploy this resource in ways that align with the market environment.

Particularly, branding capability has been applied within a number of research domains. Some scholars have proposed that branding capability plays a

critical role in achieving both marketing and financial performance (e.g., Merrilees, et al., 2011; Morgan et al., 2009; Vorhies et al., 2010; Hullah et al., 2007) and revenue growth (Hullah et al., 2007; Berthon, Hulbert & Pitt, 1999; Morgan et al., 2009). O'Cass and Ngo (2011) have argued that service branding capability is not only the antecedent of customer satisfaction, but also it mediates the relationship between market orientation and customer satisfaction. Significantly, scholars have consistently sought for responses from owners, managers, executives or senior marketing and branding executives (e.g., Merrilees, et al., 2011; O'Cass & Ngo, 2011; Morgan et al., 2009).

This literature review establishes the foundation for further discussion regarding to the role of branding capability as a driver of new service performance to be found in Chapter 3. Sections 2.3.5 and 2.3.6 discussed the theoretical importance of market knowledge and branding capability as the driving force in achieving and acquiring superior innovations. However, our understanding of the antecedent that can help firms acquire and develop market knowledge is limited in relation to both theoretical and empirical evidence. According to RBV, it is understood that complementarity exists when the value of one resource (i.e., whether practice or routine based) is enhanced by the presence of another resource (e.g., Powell & Dent-Micallef, 1997; Rivkin, 2000; Menor & Roth, 2008). Market orientation as a key antecedent of organisational resources and capabilities is discussed in following section.

2.3.7. Market orientation

This marketing concept, a cornerstone of modern marketing thought, stipulates that to achieve sustained success, firms should identify and satisfy customer needs more

effectively than their competitors (Day, 1994; Kotler, 2002). Much of the prolific market orientation literature examines the extent to which firms behave, or are inclined to behave, in accordance with this marketing concept (Kohli & Jaworski, 1990). Market orientation has been conceptualised from both behavioural and cultural perspectives (Homburg & Pflesser, 2000). The behavioural perspective concentrates on organisational activities associated with the generation, dissemination and responsiveness of market intelligence (e.g., Kohli & Jaworski, 1990). The cultural perspective focuses on organisational norms and values that encourage behaviours that are consistent with market orientation (Deshpande, Farley, & Webster, 1993; Narver & Slater, 1990).

Market orientation has been applied within many research domains. Throughout the past two decades, researchers have investigated several antecedents and consequences of market orientation to better understand its role in organisations. Some scholars have proposed that market orientation plays a critical role in achieving innovation consequences (e.g., Kirca, Jayachandran, & Bearden, 2005; Grinsten, 2008). Others have proposed that market orientation is the antecedent of firm performance in terms of financial measures (e.g., Cano, Carrillat, & Jaramillo, 2004; Morgan et al., 2009; Ellinger et al., 2008; Narver & Slater, 1990; Kohli & Jaworski, 1990; Han, Kim, & Srivastava, 1998; Hult & Ketchen, 2001), employee performance (Ellinger et al., 2008), behavioural outcomes (Matsuno, Mentzer, & Ozsomer, 2002), the quality of customer service and customer retention (Narver & Slater, 1990), sales growth (Slater & Narver, 1995), and product quality and job satisfaction (Zhou et al., 2008).

Kohli and Jaworski (1990), Day (1994), and Sinkula (1994) argue that market orientation, as an overall organisational value system, provides strong

norms for sharing information and reaching a consensus on its meaning. Day (1994a, p. 43) elaborates: "A market driven culture supports the value of thorough market intelligence and the necessity of functionally coordinated actions directed at gaining a competitive advantage." Because of its external emphasis on developing information about customers and competitors, the market-driven business is well positioned to anticipate the changing needs of its customers and to respond through the delivery of new and innovative products and services.

The above reviews, establish a solid foundation to which further discussion could be developed in the next chapter with respect to the role of market orientation, culture as a driver for service firms to effectively and efficiently acquire and develop a high level of market knowledge. It will also enable a sound development of the construct measurement in the following chapter.

Since superior and sustained service performance is grounded in the firm's ability to introduce streams of service innovations to the market (He & Wong, 2004; Tushman & O'Reilly, 1996; Damanpor et al., 2009), service firms need to efficiently and effectively introduce their exploratory and exploitative service innovations to the market in order to optimise recognition by customers and performance outcomes. The introduction of service innovations to the market can be achieved appropriately through brand strategies. Service branding literature is reviewed in the following sections.

2.4. Service branding literature

There is general agreement among scholars that strong branding is essentially a promise of future satisfaction (Berry, 2000) and the literature on service branding has been influential and widely adopted among researchers seeking to explain the

influence of branding in service marketing. Studies of service branding have investigated the relationships between brand dimensions, such as brand image, brand awareness, brand attitude, brand status, brand equity, new brand and brand extension (e.g. Davis, Buchanan-Oliver, & Brodie, 2000; O'Cass & Choy, 2008; Brodie, 2009; Völckner et al., 2010; Grace & O'Cass, 2005; Davis, Golicic, & Marquardt, 2008; Brodie, Whittome, Brush, 2009; O'Cass & Grace, 2004). Although some research has been undertaken on branding, specifically for the services sector – notably in the area of brand extension - there is a persisting lack of clarity around the role of brand strategies and their relationship with organisational resources and capabilities in enhancing performance for service organisations and markets.

Brand strategies classification, as initially described in his 1981 paper 'Brand franchise extension: new product benefits from existing brand name' Edward Tauber, define four major growth opportunities for the individual firm, using two dimensions - product category and brand name.

Figure 2-1 Tauber's Growth Matrix

Product category			
New	Existing		
New Product	Flanker Brand	New	Brand Name
Franchise Extension	Line Extension	Existing	

Source: Tauber (1981)

Tauber (1981, p.37) asserted, "...line extensions and flanker brands are defensive tactics to tie up shelf space and share of mind". Line extensions represent new sizes, flavours, and the like where items use an existing brand name in a firm's present category. Flanker brand is the term used when the product or service employs a new brand, but is introduced into a category where the firm already has a market position. Franchise extension refers to the leveraging of existing brands into new categories, while a new product leveraging new brands into new categories.

Later Ambler and Styles (1996) adapted Tauber's (1981) growth matrix to introduce the terms "new brand" and "brand extension", replacing Tauber's concepts of "new product" and "franchise extension" respectively (Figure 2-2).

New brand” and “brand extension” have since been adopted by other scholars in the branding literature (e.g., Van Riel, Lemmink, & Ouwersloot, 2001).

Figure 2-2 Revised Growth Matrix by Ambler and Styles (1996)

Product category			
New	Existing		
New Brand	Flanker Brand	New	Brand Name
Brand Extension	Line Extension	Existing	

Source: Ambler and Styles (1996)

Keller, Apéria, & Georgson (2008) argued that Tauber’s concept of franchise extension was merely a category extension. He asserted that brand extension stretches a well-established brand name to include a new-product and offering into either a totally different product category or in the same product category for a new market segment. The existing brand is called the parent or core brand because it gives life to the new brand extension (Keller et al., 2008). This implies that brand extensions fall into two general categories: category extension and line extension. Category extension occurs when a company uses the parent brand to launch a new product in a different product category from the one that it currently serves (e.g., Jeep strollers, and Honda lawn mowers). Line extension

occurs when a company applies the parent brand to a new product that targets a different market segment within a product category that the company currently serves.

On the other hand, companies may use a flanker brand as the solution to a problem or crisis situation, or as a means to expand market share. A flanker brand (also called a fighting brand) is a new brand launched in the market by a company in its current product category to fight a competitor. The name “flanker brand” comes from a war metaphor. A flanker brand protects the flagship brand from a competitor that is not competing directly with attributes and benefits that the flagship brand has nurtured (Aaker, 2004). Ideally, a flanker brand should compete in the same category as the flagship brand - without cannibalising the flagship brand’s market share - through targeting a different group of consumers. The objective of the flanker brand is to weaken the market positioning of the competitor’s brand without compelling the firm’s own flagship brand to divert its focus (Aaker, 2004). Broadly, this strategy is called fighter branding or multi branding in the sense that it can enable a company to occupy a larger total market share than one product or brand could garner alone.

According to the branding literature outlined above, new brand and brand extension strategies have been used as the tools to introduce new products and services to the market. Based on Ambler and Styles’s (1996) definition, new brand strategy is defined as using a new brand name to introduce a new service or product to the market, while brand extension is defined as a brand strategy to take advantage of present brand name recognition and image to launch new service and product categories. In short, due to the significant effects of branding in marketing, these

two brand strategies - new brand and brand extension - are used to introduce new products and services to the market.

Franchise extension (brand extension) is understood to focus on brand names, consumer awareness and good will as the most valuable assets thus enabling the company to move into a new category with a strengthened position. A further benefit is that marketing expenses are minimized for the new product or service as well as potentially increasing sales for the parent brand with important advertising efficiencies. In addition, there may be reduced risk of failure of the new services and products when the brand name already strongly takes benefits desired in the new category.

Brand strategies are generally categorised as business-level strategies, that is, dealing with the ways in which a single-business firm or an individual business unit of a multiple-business firm competes in a particular market and positions itself among its competitors (Bowman & Helfat, 2001).

As outlined in Section 2.2.2 above, in the literature on strategic marketing, scholars classify business development strategies into two forms - exploration strategies and exploitation strategies. However, at present there is a lack of clarity about the extent to which exploratory and exploitative strategies in branding - that are understood in respect of the marketing of products - are enabled by organisational resources and capabilities of firms within the services sector and can be translated into innovative actions that drive the performance of a service firms and their new service offerings.

Given that the performance implications of exploratory and exploitative strategies are only validating the context of new product performance, there exists

a lack of clarity about the extent that brand strategies as exploratory and exploitative strategies drive new service performance in the presence of specific organisational resources and capabilities.

2.5. Conclusion

This chapter has reviewed the service innovation literature - including exploratory and exploitative service innovation, RBV literature as well as service branding literature - in order to provide a context for further examination of the contribution of brand strategy implementation - through service innovation, market knowledge, market orientation and branding capability – to the performance and success of service firms. The review of these key theories has also provided a basis from which to further investigate the antecedents that enable service firms to develop superior service innovation and market knowledge. Building on this extensive review of the literature in the context of the service firm's innovation, organisational resources and capabilities, and service branding, this chapter provides the starting point for the development of the proposed model in Chapter 3.

Chapter 3 - THEORY DEVELOPMENT & HYPOTHESES

3.1. Introduction

The literature review undertaken in Chapter 2 provides the background for theory building and hypotheses development in this chapter. The primary purpose of Chapter 3 is to develop a theoretical framework and hypotheses to address the research questions presented in Chapter 1. This chapter draws on the literature on service innovation, service branding and organisational resources and capabilities.

In particular, the theoretical framework developed for this study focuses on the extent to which service firms can enhance the relationships between exploratory and exploitative service innovation, market knowledge depth and breadth, branding capability, and new service performance in order to effectively implement their brand strategies. To investigate these relationships, this chapter presents a model (shown in Figure 3-1) as the theoretical underpinning of this study. The theoretical model will then be used as a framework for hypothesis development and provide the mechanism to achieve the research objectives of this study as outlined in Chapter 1.

3.2. Model Development

The central logic of the theoretical framework development for this study is that to be effective, each brand strategy type needs a specific service innovation and specific organisational resources and capabilities. As is apparent from the discussion in Section 2.4, brand strategies are important strategic choices for

service firms launching new services to the market. Implementing brand strategies through appropriate service innovation and branding capability can lead to greater new service performance. The focus of this study is on brand strategies for new services. New brand and brand extension strategies - used for launching new services to the market – have been selected from the four brand strategies in Tauber's matrix (Figure 2-1) to form the basis of the research framework for this study. The other two brand strategies (flanker brand and line extension) are relevant to existing product and service categories, which is not the focus of this study.

As discussed in Section 2.4 there is a lack of knowledge about the particular role of brand strategies as exploration and exploitation strategies (see section 2.2.2) for services innovation. This study therefore presents a conceptual framework to articulate the role of new brand and brand extension strategies as both exploration and exploitation strategies respectively, within the domain of new service development.

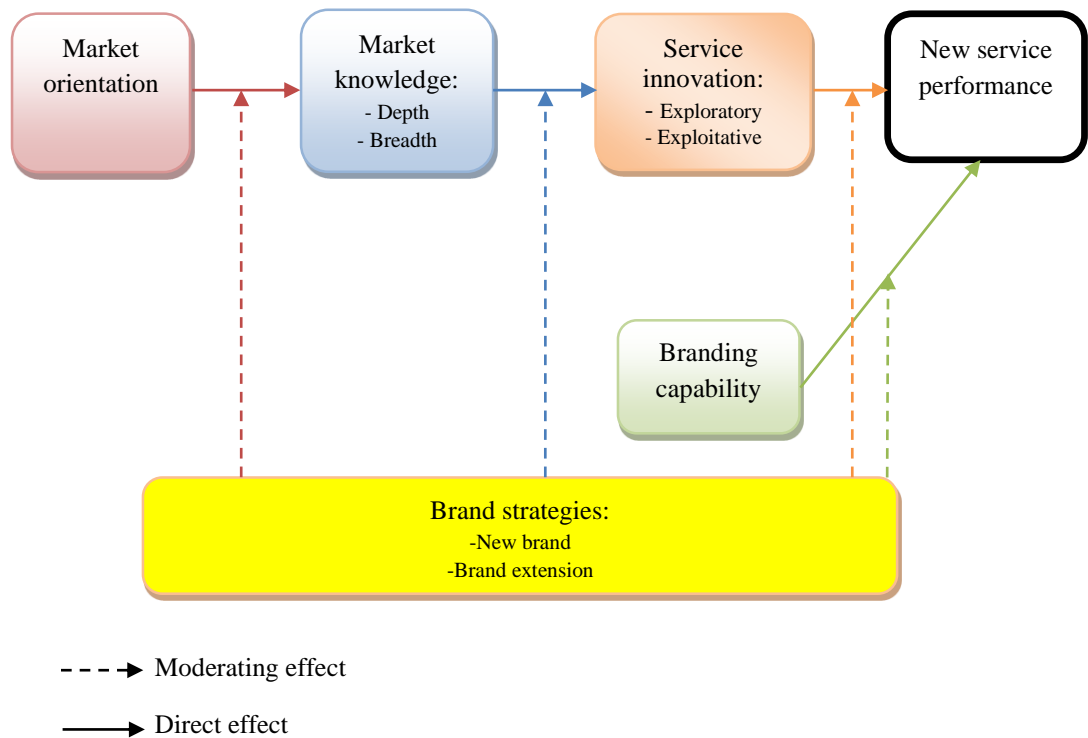
The proposed framework described in this chapter assumes there would be interactions between brand strategies, exploratory and exploitative service innovation, market knowledge dimensions, market orientation and branding capability. These interactions enable service firms to invest in appropriate service innovation, market knowledge development and branding capability - appropriate to their brand strategy - when they launch a new service to the market. The interrelational approach to understanding new service innovation places emphasises the effect of fit between organisational resources and capabilities and strategic choice on performance (e.g. Hitt & Ireland, 1985; Hughes & Morgan, 2008; Olson et al., 2005; Rogers, Miller, & Judge, 1999; Slater, Olson, & Hult 2006).

It has previously been suggested that there are significant relationships between organisational resources and capabilities, strategic choice, and performance (O'Cass & Ngo, 2011; Matsuno & Mentzer, 2000; Merrilees et al., 2011). However, there is a lack of clarity around the consequences of the interactions between brand strategies (new branding and brand extension), service innovation types, organisational resources and capabilities. It may be assumed that service firms make their brand strategy choices rationally, in order to cope with their conditions - such as their organisational resources and capabilities - and to achieve the best possible new service performance (Chang & Chen, 2013). Following this line of reasoning, market knowledge, market orientation and branding capability - as significant organisational resources and capabilities of service firms - along with brand strategy types and new service performance, are considered to be the basic components (or constructs of interest) for developing the theoretical framework and hypotheses of this study.

The theoretical model for this study has been colour coded to facilitate understanding (see Figure 3-1). The use of blue indicates market knowledge as the antecedent of service innovation. This study focuses on two dimensions of market knowledge - market knowledge depth and breadth - which are two distinct dimensions of a firm's market knowledge, revealing both the structure and content of firm's market knowledge (Zhou & Li, 2012). The use of red indicates market orientation as the antecedent of market knowledge. The use of orange indicates service innovation as a driver of new service performance. As discussed in Section 2.2.2, this study uses two forms of service innovation; exploratory and exploitative service innovation (e.g., Atuahene-Gima, 2005; Jansen et al., 2006; Yalcinkaya, Calantone, & Griffin, 2007). The use of green indicates branding capability as the

antecedent of new service performance. Finally, the use of yellow indicates the moderating role of brand strategies on the relationship between other constructs. In the following sections, related hypotheses for each component and their relationships are developed.

Figure 3-1 Theoretical model



Source: developed for this study

3.2.2. The moderating effect of brand strategies on the relationship between market knowledge dimensions and service innovation types - Hypothesis 1

This section discusses the extent to which market knowledge depth and breadth, enable a service firm to deploy exploratory service innovation and exploitative service innovation in implementing their brand strategy. Figures 3-2 and 3-3 illustrate the relationships between market knowledge depth and breadth,

exploratory and exploitative service innovation and new brand and brand extension strategies.

As outlined in Section 2.4.2, new brand strategy is defined as an exploratory strategy adopted when the firm's emphasis is on developing new service-market opportunities and meeting emerging customer needs, by launching a new service under a new brand name (Tauber, 1981; Ambler & Styles, 1996). According to Harmancioglu et al. (2009), the development and marketing of innovative products may have a poor fit with prior organisational routines within firms. Therefore it seems likely that the implementation of new brand strategies for services will also be challenging, as service firms could also be expected to encounter deficiencies in existing routines in the course of their efforts to enter new market domains (He & Wong, 2004; Atuahene- Gima, 2005). For this reason, exploratory service innovation, which has also been defined as radical innovation, may be a lower risk or more effective strategy for creating new markets and meeting the needs of emerging markets (Benner & Tushman, 2003; Danneels, 2002) and new customers. The very nature and processes of exploratory service innovation can facilitate the implementation of new brand strategies by identifying and finding solutions to deficiencies in existing routines.

Furthermore, as discussed in Section 2.3.4, market knowledge breadth refers to the firm's understanding of a wide range of diverse customer and competitor types and factors that describe them (Zhou et al., 2008). In other words, a firm is said to have broad market knowledge if it has knowledge of a wide variety of current and potential customer segments and competitors and also uses a diverse set of parameters related to customers (e.g., needs, behaviors, characteristics) and competitors (e.g., products, markets, strategies), to describe, analyse and evaluate

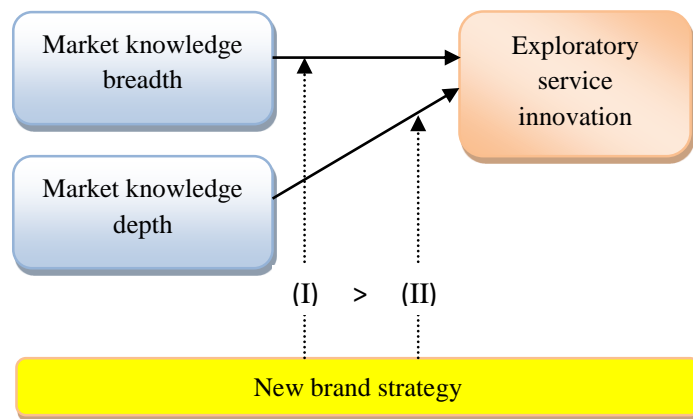
them (e.g., Zahra, Ireland, & Hitt, 2000). Accordingly, market knowledge breadth engenders product and service innovation performance because it increases the firm's ability to make connections among disparate market information, ideas, and concepts to gain broad and insightful perspectives on its market (Reed & DeFillippi, 1990). Taylor and Greve (2006) suggest that firms with diverse market knowledge domains are more likely to generate cutting-edge ideas and novel combinations of knowledge components. Therefore, broad market knowledge based on varied, accumulated observations and cues, facilitates understanding of new information and potential changes, and enhances the firm's ability to detect market opportunities for radical innovation (Chesbrough, 2003).

To this end, a market knowledge breadth which results in the generation of exploratory service innovation is needed for implementing new brand strategy. This implies that service firms launching a new service under a new brand name, need greater market knowledge breadth than market knowledge depth, in order to understand a wide range of diverse potential customers and competitors and to deploy exploratory service innovation in new market domains. Market knowledge depth that is defined as deep market knowledge in a specialised field (Tripsas & Gavetti, 2000), is generally less helpful in deploying exploratory service innovation for new brand strategy users, nevertheless, market knowledge depth is often helpful in establishing technology for minor improvements (Levinthal & March, 1993). Such refined expertise is likely to prompt incremental improvement - yielding immediate and foreseeable returns - rather than rule-breaking ideas for longer-term, radical innovation. As indicated in Figure 3-2, the effect of market knowledge breadth on exploratory service innovation (see path I in Figure 3-2) is hypothesised

to be greater than the effect of market knowledge depth on exploratory service innovation (see path II in Figure 3-2) for new brand strategy users. Therefore:

Hypothesis 1a: the influence of market knowledge breadth is greater than the effect of market knowledge depth on exploratory service innovation for new brand strategy users.

Figure 3-2 Model development - Hypothesis 1a



Brand extension strategy, by contrast, is an exploitative strategy - the launching of a new service under an existing brand name -, appropriate when the firm's emphasis is on existing market opportunities and current customer needs (Tauber, 1981; Ambler & Styles, 1996). In other words, brand extension is a strategy that takes advantage of the present positive brand recognition and image to launch new service categories to the existing market/s (Friar, 1995). According to Morgan and Berthon (2008), exploitative strategy involves a reaction to existing knowledge and leads to refinement of existing routines. In certain circumstances, a firm may consider it more appropriate to refine and deploy its existing routines rather than risk generating new routines to implement an exploitative strategy

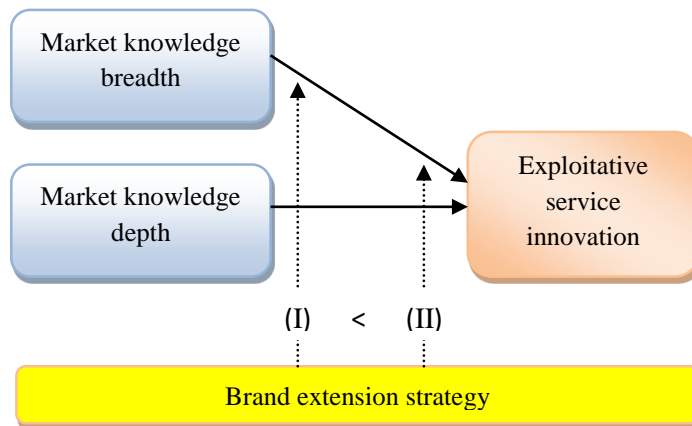
(Atuahene-Gima, 2005; Voss et al., 2008). Therefore, exploitative service innovation - which is defined as incremental innovations to meet the needs of existing customers or markets (Benner & Tushman, 2003; Danneels, 2002) - by reinforcing existing skills, processes, and structures (Benner & Tushman, 2003; Jansen et al., 2006), can assist in implementing exploitative strategies (McCarthy & Gordon, 2011), and also enable the implementation of brand extension as an exploitative strategy.

Like new brand strategy, brand extension strategy is also affected by the firm's breadth and depth of market knowledge. Tripsas and Gavetti (2000) indicated that deep market knowledge in a specialised field may generate cognitive inertia, which constrains the firm to its current market segment or established technology for minor improvement (Levinthal & March, 1993), but deteriorates its ability to pioneer using emerging technologies (Christensen & Bower, 1996). A firm with a deep market knowledge has accumulated thorough experience and know-how about existing technologies and markets, which enable a deeper and more refined understanding of its existing knowledge (Kale & Singh, 2007; Tsai, 2001). However, such refined expertise likely prompts more incremental improvement, yielding immediate and foreseeable returns, rather than rule-breaking ideas for radical innovation. As Christensen and Bower (1996) document, when a firm becomes deeply entrenched with existing markets, it tends to focus on incremental innovations that are favored by its existing customers, but the firm tends to forgo explorations of new ideas for emerging markets. Accordingly, market knowledge depth is probably associated with the generation of ideas for minor refinement or extension of existing knowledge, but not the discovery of breakthrough ideas for radical innovation (Zhou & Li, 2012).

To this end, market knowledge depth is needed in the generation of exploitative service innovation to implement brand extension strategy. This implies that service firms launching a new service under an existing brand name need greater market knowledge depth than market knowledge breadth to deeply understand current customer needs and competitors and to deploy exploitative service innovation in their current market. As indicated in Figure 3-3, the effect of market knowledge depth on exploitive service innovation (path II) is hypothesised to be greater than the effect of market knowledge breadth on exploitative service innovation (path I) for brand extension strategy users. Therefore:

Hypothesis 1b: The effect of market knowledge depth on exploitative service innovation is greater than the effect of the market knowledge breadth on exploitative service innovation for brand extension strategy users.

Figure 3-3 Model development - Hypothesis 1b



3.2.2. The moderating effect of brand strategies on the relationship between market orientation and market knowledge - Hypothesis 2

This section discusses the extent to which market orientation enables service firms to acquire market knowledge appropriate to their brand strategy type. Figures 3-4 and 3-5 illustrate the relationships between market orientation, market knowledge dimensions, and brand strategies. As outlined in Section 2.3.6, market orientation provides strong norms for learning from customers and competitors through collected market information (Slater & Narver, 1995). This is what Kohli and Jaworski (1990) refer to as the active component of market orientation, an organisation-wide responsiveness to market information. Market orientation is a first-order resource that underpins the competencies needed to develop and nurture other resources and capabilities, in order to achieve superior performance.

As competitor strategies and customer preferences change over time, service firms must be able to acquire knowledge about those changes to respond effectively by developing more or different service choices. Market orientation enables service firms to implement appropriate management practices, structures and procedures in order to facilitate and engage the learning process (Lenard-Barton, 1992). Therefore, according to current literature, the broad and deep understanding of customers and competitors is deeply grounded in the market orientation construct (Luca & Atuahene-Gima, 2007). Furthermore, Luca and Atuahene-Gima (2007) suggest that marketing managers are fervent adherents of the market orientation tenet, in particular with respect to the value of acquiring broad and comprehensive knowledge about customers and competitors. Within the context of this study, market orientation is treated as the antecedent of market knowledge, enabling the development and implementation of more efficient and

effective market knowledge depth and breadth. The development and subsequent implementation of this resource can result in the service firms' ability to develop and deliver new service choices in a timely manner, as well as serve and satisfy customers better than their competitors. Market orientation requires constantly adapting to consumer needs (Merrilees et al., 2011) which may be possible through market knowledge.

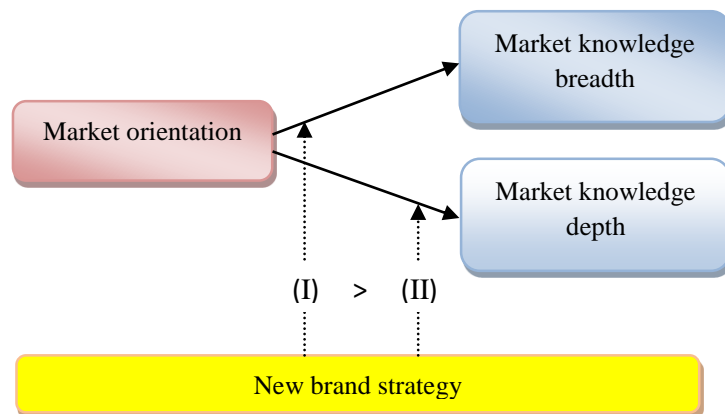
As discussed in the previous section, new brand strategy, as an exploration strategy, is appropriate when the firm's emphasis is on new market opportunities and emerging customer needs (Tauber, 1981; Ambler & Styles, 1996). Furthermore, according to Luka and Atuahene-Gima (2007), market knowledge breadth assists firms to have an understanding of a wide range of diverse and potential customers and competitors, and contributes to a greater potential for recombining different elements of the knowledge in order to improve opportunity recognition and creative potential (Kogut & Zander, 1993). Accordingly, a new brand strategy user may place more emphasis on a broad understanding of a wide range of diverse potential customers and competitors.

To this end, market orientation is a necessary precursor to the generation of market knowledge breadth for implementing a new brand strategy. This implies that service firms launching a new service under a new brand name need market orientation in order to acquire broad knowledge of diverse potential customers. Without such knowledge about the characteristics of different segments, firms would struggle to make the optimal decision about the new market in which to launch a new service under a new brand name. As indicated in Figure 3-4 the effect of market orientation on market knowledge breadth (path I) is hypothesised to be

greater than the effect of market orientation on market knowledge depth (path II) for new brand strategy users. Therefore:

Hypothesis 2a: The effect of market orientation on market knowledge breadth is greater than the effect of market orientation on market knowledge depth for new brand strategy users.

Figure 3-4 Model development - Hypothesis 2a



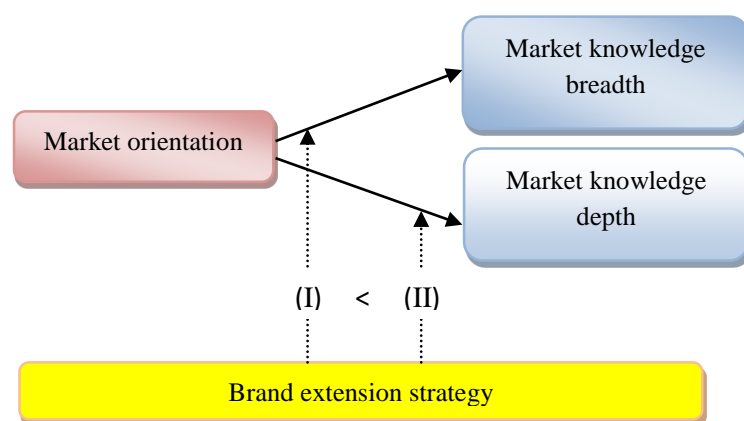
Brand extension is a brand strategy for launching a new service under an existing brand name in the current market to meet the needs of existing customers. According to Luka and Atuahene-Gima (2007), market knowledge depth assists firms to have a deep knowledge of its markets, encompassing information about, for instance, customers' needs, behaviours, preferences and competitors' products and strategies. A service firm will need to have a deep knowledge of its own market (as opposed to knowledge of other markets) in order to serve its own market in a deep and more specific way when implementing brand extension strategy. Knowledge depth - which is the amount of within –field knowledge the firm

possesses (Prabhu et al., 2005) - may assist brand extension strategy users to capture the horizontal dimension of the existing market and have a deep understanding of its market.

To this end, a market orientation, which underpins and results in the generation of market knowledge depth, is necessary for optimal implementation of brand extension strategies. This implies that a service firm, launching a new service under an existing brand name, will need market orientation in order to acquire deep knowledge of its customers. As indicated in Figure 3-5 the effect of market orientation on market knowledge depth (path I) is hypothesised to be greater than the effect of market orientation on market knowledge breadth (path II) for new brand strategy users. Therefore:

Hypothesis 2b: The effect of market orientation on market knowledge depth is greater than the effect of market orientation on market knowledge breadth for brand extension strategy users.

Figure 3-5 Model development - Hypothesis 2b



3.2.3. The moderating effect of brand strategies on the relationship between branding capability and new service performance - Hypothesis 3

This section discusses the extent to which branding capability enables service firms to achieve superior new service performance from their brand strategy type. Figure 3-6 illustrates the relationship between branding capability, new service performance, and brand strategies. As outlined in Section 2.3.5, in an increasingly competitive environment, markets are more globalised, competition is more intense, and customers are more demanding. In this dynamic environment, branding plays an important role in providing links with customers when new services are launched, in that it enables service firms to compete effectively by creating and managing durable relationships with various stakeholders including customers and channel members (Song et al., 2005).

Branding serves as the basis to facilitate marketing processes - such as advertising and promotion, marketing communication, distribution, and pricing - through which specific new service performance outcomes can be realised. Service firms may possess superior distribution channels, superior pricing capability, and the like, but if the service itself has a poor reputation and the firm has ineffective customer communication, it is unlikely that the service firm will achieve superior new service performance. As Berry (2000) argues, the reputation of the service, the service firm itself and its customer service often act as the driver of customer choice. Drawing on the work of Slotegraaf et al. (2003), this study argues that superior new service performance cannot be achieved by the presence of a low level of branding capability. Branding capability - which is defined as a firm's ability to link with customers - enables the service firm to effectively compete -in respect of pricing,

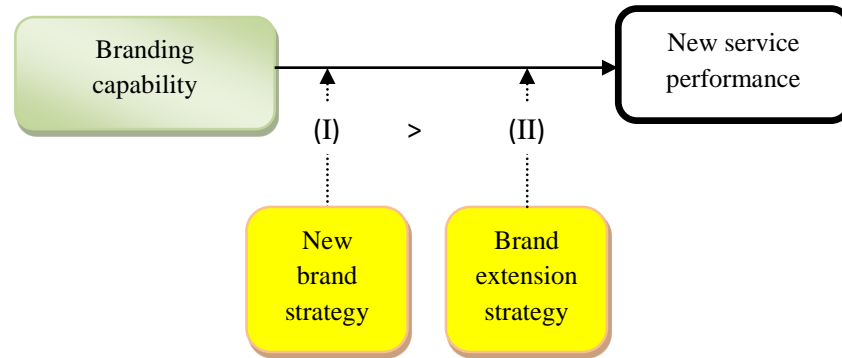
channel management, market communication, market planning, marketing, and so on - within its chosen markets.

Since branding capability concerns the processes and activities that enable firms to develop, support, and maintain strong brands (Morgan, Slotgraph, & Vorhies, 2009), users of both brand strategies need this capability to achieve superior new service performance. However, this study argues that new brand strategy users may need more powerful branding skills - to create and develop a positive brand position - compared with brand extension strategy users. The reasoning behind this argument is that, brand extension strategy users have already developed and established brand. Therefore, they only need to maintain their brand in the current market, whereas new brand strategy users will need to undertake brand planning and development processes, then launch the new brand and service/s to the market, as well as supporting and maintaining the brand.

Therefore, although brand extension strategy users need a strong branding capability to maintain the existing brand in the existing market, they need less branding capability compared to new brand strategy users. As indicated in Figure 3-6, the effect of branding capability on new service performance is hypothesised to be greater for new brand strategy users (Path I) than brand extension strategy users (Path II). Therefore:

H3: The relationship between branding capability and new service performance is greater for new brand strategy users than brand extension strategy users.

Figure 3-6 Model developments - Hypothesis 3



3.2.4. The moderating effect of brand strategies on the relationship between service innovation and new service performance -

Hypothesis 4

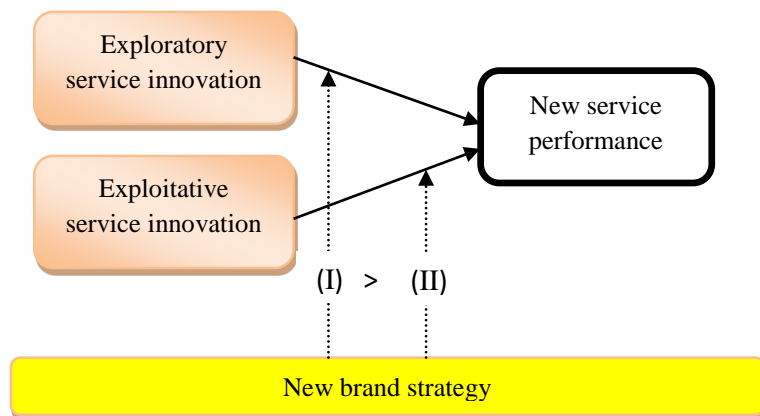
This section discusses the extent to which service innovations enable service firms to achieve superior new service performance from their brand strategy type. Figures 3-7 and 3-8 illustrate the relationship between exploratory service innovation, exploitative service innovation, new service performance, and brand strategies.

As explained in Section 2.4.2, new brand strategy, as an exploratory strategy, is appropriate when the firm has set its sights on new service-market opportunities and emerging customer needs (Tauber, 1981; Ambler & Styles, 1996). According to Harmancioglu et al. (2009), the development and marketing of innovative services and products may have a poor fit with existing organisational routines within firms. New brand strategy involves heavy investment with high risks, costs, and potentially radical changes to organisational processes (Arslan & Altuna, 2010). Furthermore, the implementation of new brand strategy is challenging, as firms may face deficiencies in existing routines in their efforts to enter new market domains (He & Wong, 2004; Atuahene-Gima, 2005).

In particular, exploratory service innovation is particularly useful in creating new markets through radical innovations and meeting the needs of emerging markets (Benner & Tushman, 2003; Danneels, 2002) and new customers. This implies that, in order to achieve superior new service performance, service firms launching a new service under a new brand name need to create new markets through radical innovations and meeting the needs of emerging customers. As indicated in Figure 3-7, the effect of exploratory service innovation on new service performance (path I) is hypothesised to be greater than the effect of exploitative service innovation on new service performance (path II) for new brand strategy users. Therefore:

Hypothesis 4a: The effect of exploratory service innovation on new service performance is greater than the effect of exploitative service innovation on new service performance for new brand strategy users.

Figure 3-7 Model development - Hypothesis 4a



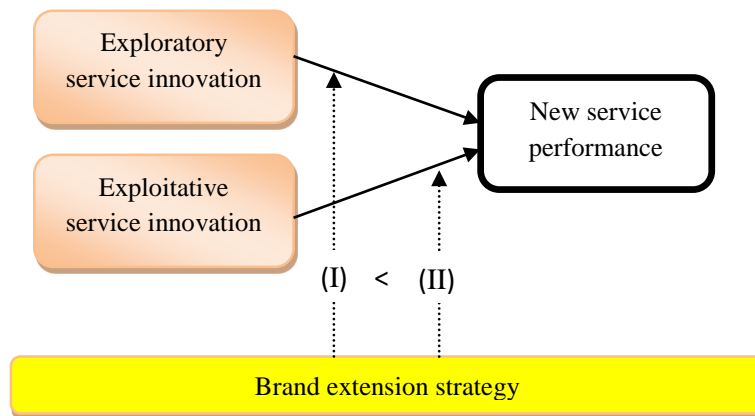
Brand extension strategy, as an exploitative strategy is appropriate when the firm is focused on existing market opportunities and current customer needs

(Tauber, 1981; Ambler & Styles, 1996). According to Morgan and Berthon (2008), exploitative strategy involves a reaction to existing knowledge and leads to refinement of existing routines. In this sense, a firm may place more emphasis on the refinement and deployment of its existing routines, rather than generating new routines, when exploitative strategy is adopted (Atuahene-Gima, 2005; Voss et al., 2008).

To this end, exploitative service innovation is needed to implement brand extension strategy. This implies that service firms launching a new service under an existing brand name will need to reinforce existing skills, processes, and structures in order to achieve superior new service performance. As indicated in Figure 3-8, exploitative service innovation (path II) is hypothesised to have a greater effect on new service performance than the effect of exploratory service innovation on new service performance (path I) for brand extension strategy users. Therefore:

Hypothesis 4b: The effect of exploitative service innovation on new service performance is greater than the effect of exploratory service innovation on new service performance for brand extension strategy users.

Figure 3-8 Model development - Hypothesis 4b



3.3. Conclusion

The purpose of this chapter was to identify and describe the multiple interrelationships between organisational service innovation, market knowledge depth and breadth, market orientation, branding capability, and brand strategies. The central argument of this framework is that the relationships between organisational service innovation, resources and capabilities vary significantly for new brand and brand extension strategy users. This theoretical framework consists of four hypotheses. Hypothesis 1 expresses the relationships between service innovation and market knowledge dimensions. This hypothesis suggests that the effect of market knowledge depth and breadth is varies with exploratory and exploitative service innovation for new brand and brand extension strategy users. Hypothesis 2 expresses the varying effects of market orientation on market knowledge depth and breadth with respect to the type of brand strategy. Hypothesis 3 expresses the varying effects of branding capability on new service performance for new brand and brand extension strategy users. Hypothesis 4 expresses the varying effects of exploratory and exploitative service innovation on new service performance for new brand and brand extension strategy users. The research model and hypotheses discussed in this chapter provides the foundation for the

methodological and research design choices adopted for this study, which will be described in Chapter 4.

Chapter 4 - RESEARCH DESIGN

4.1. Introduction

To connect the research questions underpinning the study and hypotheses presented in Chapter 3 to data, it is important to develop and deploy an appropriate research design. The research design establishes a framework or detailed blueprint that guides the implementation of research. Research design includes the specific research paradigm; the preliminary research planning stage, research approach (data collection method), research tactics (the development of measures, sampling plan, and anticipated data analysis), research costs, time requirements, and data collection, which is part of the implementation stage of the research plan. A framework to guide the design and implementation of the research developed by Aaker, Kumar, & Day (2004) is discussed in this chapter and has been adapted to address the hypotheses presented in Chapter 3.

4.2. Methodology

Punch (2005) argues that employing an appropriate research paradigm and adopting a methodology that is compatible with the theoretical model of the research paradigm is important for academics. Within the marketing literature, scholars have given attention to two key broad methodologies: quantitative and qualitative (Ngo & O'Cass, 2009; Vorhies et al., 2009).

A quantitative methodology is considered an objective method, using structured questions with pre-set response choices in data collection (Burns & Bush, 2006). Quantitative methodology employs statistical analysis techniques to

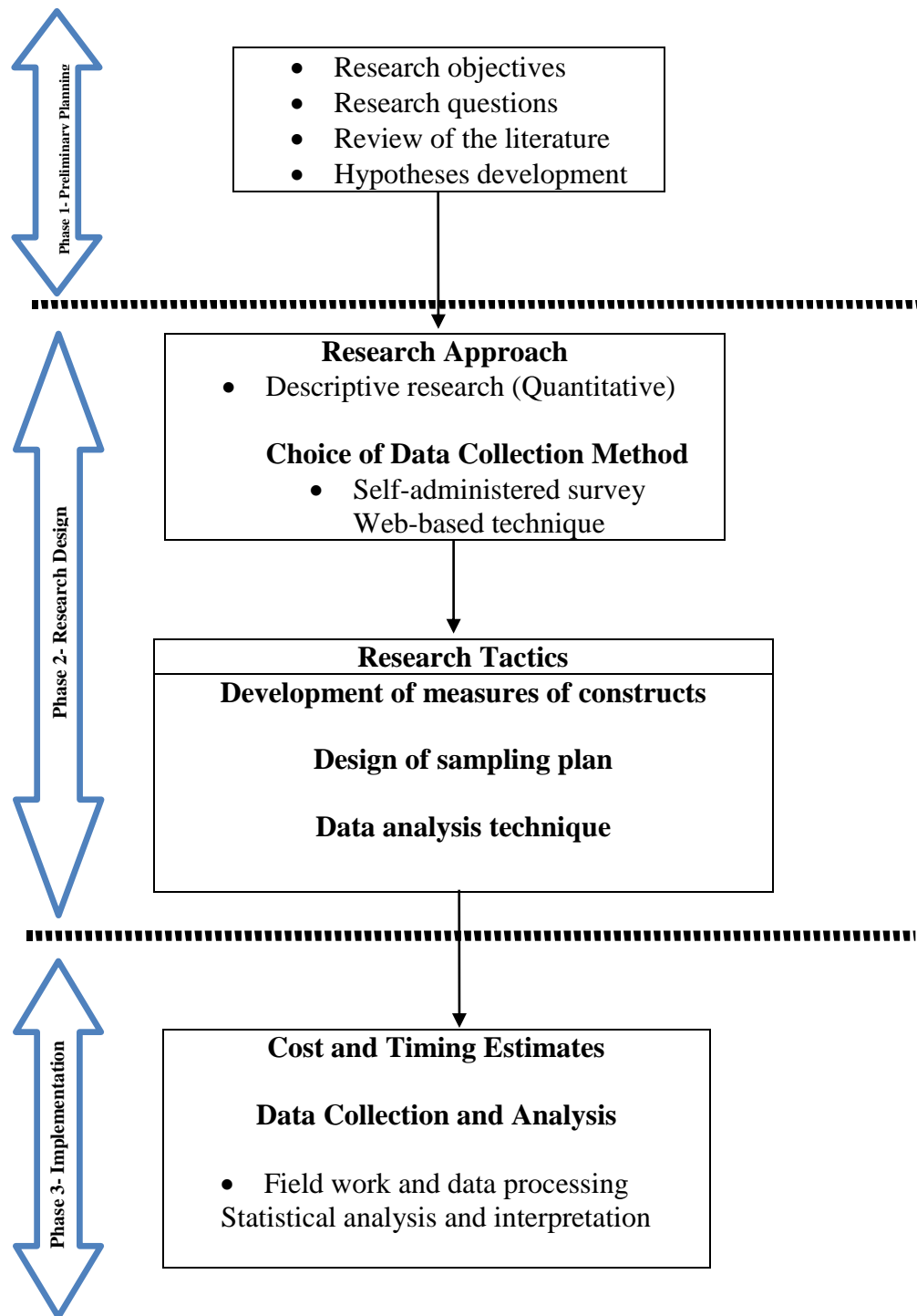
analyse the data collected from the research questions (Ali & Birley, 1999; Scandura & Williams, 2000). By contrast, a qualitative methodology is considered a subjective method that focuses on stated analysis, rather than statistical analysis, of the data collected (Szmigin & Foxall, 2000; Shankar & Goulding, 2001).

Quantitative approaches have been adopted by a number of researchers within the field of this study, notably for topics related to branding (O'Cass & Ngo, 2011; Ratnatunga & Ewing, 2009), innovation (Rosenbusch, Brinckmann, & Bausch, 2011), and organisational resources and capabilities (Galbreath, 2005; Villanueva et al., 2012). Moreover, since this study endeavours to test a set of pre-stated hypotheses, the quantitative method is appropriate for identifying multiple relationships among the constructs (as illustrated in Figure 3-5 above).

4.3. Research Planning

Planning a research project involves engaging in specific tasks and making decisions that often interrelate and are undertaken in parallel (Blaikie, 2000). These tasks are grounded in a planning procedure consisting of sequential tasks and feedback loops – adapted from the framework developed by Aaker et al. (2004) - that facilitates the development and refinement of research tactics and includes a research design phase that presents important guidelines for data collection and data analysis. Figure 4-1 below outlines the three phases of the research design process; preliminary planning, research design and implementation.

Figure 4-1 Research Design Process



Source: Adapted from Aaker et al. (2004)

4.3.1. Preliminary planning phase

Aaker et al. (2004) recognise a number of tasks in the preliminary planning phase.

These include problem identification, development of research questions and

hypotheses, and the justification and contribution of the proposed study. Chapter 1 and Chapter 2 provided the foundation for the development of the theoretical model presented in Figure 3-5 by identifying the research objectives, the justifications of the study and reviewing the literature in related research areas (i.e. service branding, RBV, and service innovation). The next phase of the research planning process – the research design (refer to phase Two, Figure 4-1) is presented next.

4.3.2. Research design phase

When the preliminary planning phase is finalised, the next phase is developing the research design. During the research design phase guidelines for selecting technique for collecting data are developed, the role of the researchers is outlined, the measures are developed, the sampling plan is developed, as are the anticipated data analysis methods (Hair et al., 2003; Burns & Bush, 2006). As indicated in Figure 4-1, Phase Two focuses on two main issues: the research paradigm - which gives consideration to the research approach and the data collection methods - and the development of research tactics - including the development of measurements and choosing the most appropriate data analysis techniques.

4.3.2.1. Research paradigm

1. Research approach

The research approach is a critical step in research design as it defines the way that information will be acquired. Aaker et al. (2004) argue that selecting the research approach is dependent on the objectives of the research, the data collection methods, and the precision of the hypotheses. According to some scholars (e.g. Burns & Bush, 2000; Aaker et al., 2004), a research approach can be categorised

into three types, namely exploratory, descriptive and causal. The main objective of exploratory research is to deliver an understanding of the research problem. Exploratory research is used when the problem must be defined more precisely and the researcher needs to identify a related course of action or achieve further insights before the development of a focused approach can take place. The required information is only defined roughly at this stage, and the adopted research procedure is flexible and unstructured. An exploratory approach is a suitable approach in flexible and unstructured research process when the sample size is small and non-representative (Malhotra et al., 2002).

Descriptive research is a quantitative method, which collects primary data in a systematic process to describe the current characteristics of a defined population (Hair et al., 2012). The objective of the descriptive approach is to examine particular hypotheses and specific relationships in which the needed information is clearly specified. The descriptive approach is defined more formal and structured than exploratory research. It is based on large representative samples and the collected data are subject to quantitative analysis. The results of descriptive research are considered conclusive, and have the potential for being the basis of sound managerial decision-making (Malhotra et al., 2002).

The objective of causal research is to infer the causation of previously identified relationships (Aaker et al., 2004; Malhotra, 2006) and may also be used to investigate whether a change in a particular construct is likely to have been affected by a detected change in another construct (McDaniel & Gates, 2001). It was determined that the most appropriate research design approach for this study would be a descriptive research approach, as the proposed hypotheses discussed and presented in Chapter 3 described the relationships among the seven constructs.

II. Data collection methods

Deciding on the research approach and choosing a suitable data collection technique are vital elements of the research design phase (Aaker et al., 2004). This study uses primary data to produce specific information for testing the hypotheses. There are three common approaches to collecting primary data - survey, observation and experiment (Burn & Bush, 2000).

The survey method has been widely used in primary data collection for quantitative studies in the marketing and management areas (e.g., Ngo & O'Cass, 2009; Vorhies et al., 2009; Sok & O'Cass, 2011; O'Cass & Sok, 2013); therefore, the survey approach is deemed an appropriate data collection method for this study. In surveys, respondents generally answer a range of questions about their behaviours, intentions, attitudes, attentiveness, motivations, and demographics. Several advantages exist for survey methods, including: being easy to manage, the obtained data are considered to be trustworthy, because the responses are restricted to the options provided, and furthermore the coding, data analysis and interpretation of data from surveys are relatively straightforward (Malhotra et al., 2002).

There are three different forms of survey: interviewer-administered, computer-administered, and self-administered surveys (Burns & Bush, 2006). Each method has its own advantages and challenges regarding the time, cost, and response rate. For example, a person-administered approach allows the researcher to achieve a high response rate. However, this approach involves relatively higher costs in terms of budget and time, as well as incurring the risk of interviewer bias (Hair et al., 2000). By contrast, a computer-administered approach reduces the risk of interviewer bias and enhances the speed and accuracy of data collection;

however, it introduces additional challenges in relation to confidentiality. In addition, a self-administered approach is relatively cost effective, especially when the study is aiming to obtain large amounts of data, however the length of the survey may decrease the response rate.

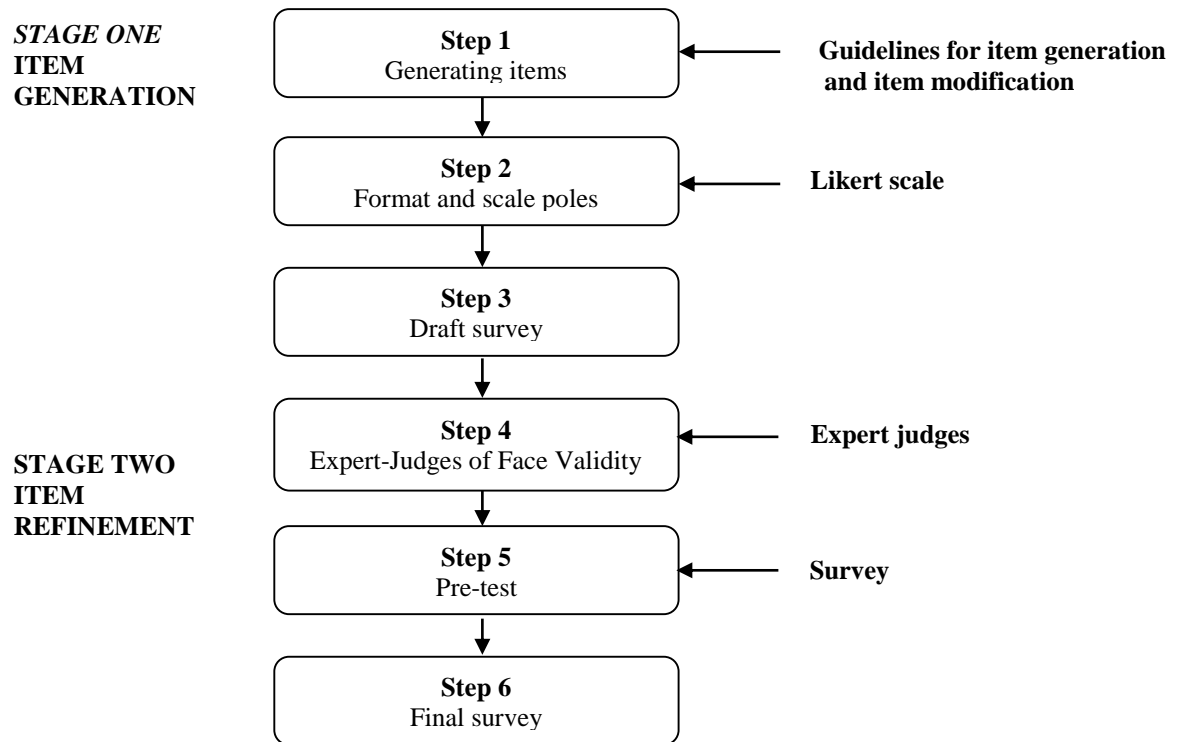
Following consideration of the advantages and disadvantages of these three survey administration methods, it was decided that the computer-administered approach was the most suitable method for this study. This approach would provide benefits from reducing the risk of interviewer bias, offering the ability to accommodate a long survey and gaining large sample in the most cost effective way (Malhotra et al., 2002). Survey Monkey, which is commonly used in academic research, was chosen as a host site for the survey design (Sherry, Thomas, & Chui, 2010). Moreover, adopting the computer-administered approach enabled the researcher to download data in SPSS, as well as simplifying the coding and sorting of data.

4.3.2.2 Research tactics

Once the data collection method had been chosen, the next step is to develop the research tactics, which include three important stages: the development of measures of constructs, the design of the sampling plan, and the design of data analysis plans. Rogelberg et al. (2001) recommend that careful attention be given to develop a sound survey instrument. Figure 4-2 illustrates the two-stage measurement development process, developed by Churchill (1979), which was adopted in this study. Stage One includes three main steps: generating items from the literature (step 1), selecting and formatting the scale poles (step 2), and producing a draft survey (step 3). Stage Two includes: face validation by expert-judges (step 4) which leads to the refinement and deletions of the items, pre-testing

(step 5) after which formatting adjustments are made as appropriate, and preparing the final survey (step 6). The final survey for this study, resulting from step 6, is contained in Appendix 1.

Figure 4-2 Measurement Development Procedures



Source: Adapted from Churchill (1979)

I. Measurement development

Step 1: Generating items

The literature review undertaken in Chapter 2 provided the background to developing the measurements for all constructs, including exploratory and exploitative service innovation, branding capability, market knowledge depth and breadth, market orientation, brand strategies and new service performance.

Measuring new service performance: Building on the literature relating to new service performance, which was discussed in Chapter 2, this study focused on the conceptualisation of the marketing aspects of new service performance adapted from Rosier, Morgan, & Cadogan (2010). Accordingly, new service performance was measured via five items including customer satisfaction, customer retention, the amount of new customers, competitive position, and response to competitive pressure. Examples of the items generated for new service performance are shown below:

➤ *The following statements are related to the specific new service identified by you in the box A. Think about your own understanding and knowledge of this new service performance and circle the number from 1 to 7 in each statement that best reflects your views.*

- *The proposed new service has been affected by increasing customer satisfaction.*
- *The proposed new service has been affected by increasing customer retention.*

Measuring service exploratory and exploitative service innovation: Building on the literature relating to service innovation discussed in Section 2.2.2, and focusing on the conceptualisation of exploration and exploitation terms in the marketing literature, exploratory service innovation and exploitative service innovation were measured via 12 items adopted from Jansen et al. (2006).

Six items were generated, based on the work of Jansen et al. (2006), to measure exploratory service innovation. These items focus on meeting the needs of new customers and emerging markets, capturing the ability of service firms to accept demands beyond existing services, inventing new services, experimenting with

new services in local markets, commercialising new services, utilising frequent new opportunities in new markets, using new distribution channels regularly and searching regularly for new clients in new markets. Examples of items generated for exploratory service innovation are shown below:

➤ *The following statements refer to specific information about your firm. Think about your own understanding and knowledge of your firms' strategies and business operations. Please circle the number from 1 to 7 in each statement that best reflects your views.*

- *We accept the demands that go beyond existing services.*
- *We invent new services.*

A further, six items were generated, also based on the work of Jansen et al. (2006), to measure exploitative service innovation. In contrast to exploratory service innovation, exploitative service innovation items focus on meeting the needs of existing customers and markets, capturing the ability of service firm to frequently refine the provision of existing services, implementing regularly small adaptations to existing services, introducing improvement in existing services, improving the efficiency of current services, increasing economies of scale in existing services, expanding services for existing clients, and providing lowering costs of internal processes. Examples of the generated items for exploitative service innovation are shown below:

➤ *The following statements refer to specific information about your firm. Think about your own understanding and knowledge of your firms' strategies and business operations. Please circle the number from 1 to 7 in each statement that best reflects your views.*

- *We frequently refine the provision of existing services.*
- *We regularly implement small adaptations to existing services.*

Measuring service branding capability: Building on the literature relating to service branding discussed in Section 2.3.5, and focusing on the conceptualisation of branding capability, service branding capability was measured via 12 items adopted from Vorhies, Orr, and Bush (2010). Examples of the items generated for service branding capability are shown below:

- *Please indicate how your marketing organisation performs the following activities with your brands in comparison with your main competitors.*
- *We focus on creating a positive brand experience for our stakeholders.*
- *We keep in touch with current market conditions in relation to our brand.*

Measuring market knowledge depth: Building on the literature in relation to market knowledge discussed in Section 2.3.4, market knowledge depth and breadth as two dimensions of market knowledge were measured via ten items adopted from Luca and Atuahene-Gima (2007). In particular, four items were generated based on the work of Luca and Atuahene-Gima (2007) to measure market knowledge depth. These items focused on the level of sophistication and complexity of a firm's knowledge of its customers and competitors to capture service firm ability of deep understanding of customers and competitor's strategies. Examples of the generated items for market knowledge depth are shown below:

- *The following statements refer to information about your firm's market knowledge compared to competitors. In each statement, please circle the number from 1 to 7 in each statement that best describe your firm's market knowledge compared to major competitors.*
- *Compared to our major competitors, our firm's knowledge about the competitors' strategies is*

- *Compared to our major competitors, our firm's knowledge about customers is.....*

A further six items were generated based on the work of Luca and Atuahene-Gima (2007) to measure market knowledge breadth. These items focused on the firm's understanding of the number of different knowledge domains and wide range of diverse customer and competitor types and factors to capture the service firm's ability of broad knowledge of customers and competitor's strategies. Examples of the generated items for market knowledge breadth are shown below:

- *The following statements refer to information about your firm's market knowledge compared to competitors. In each statement, please circle the number from 1 to 7 in each statement that best describes your firm's market knowledge compared to major competitors.*
- *Compared to major competitors, our firm's knowledge of our competitors' strategies is*
- *Compared to major competitors, our firm's knowledge of our customers is*

Measuring market orientation: Building on the literature relating to market orientation discussed in Section 2.3.6 and focusing on the conceptualisation of market orientation from a cultural point of view, market orientation was measured via an eight-item scale adopted from Zhou et al. (2008). Examples of the generated items for market orientation are shown below:

- *The following statements refer to specific information about your firm. Think about your own understanding and knowledge of your firm's business philosophy towards the market. Please circle the number from 1 to 7 in each statement that best reflects your views.*
- *Our business objectives are driven primarily by customer satisfaction.*

- *Our strategies are driven by beliefs about how we can create greater value for customers.*

Step 2: Format and Scale Poles

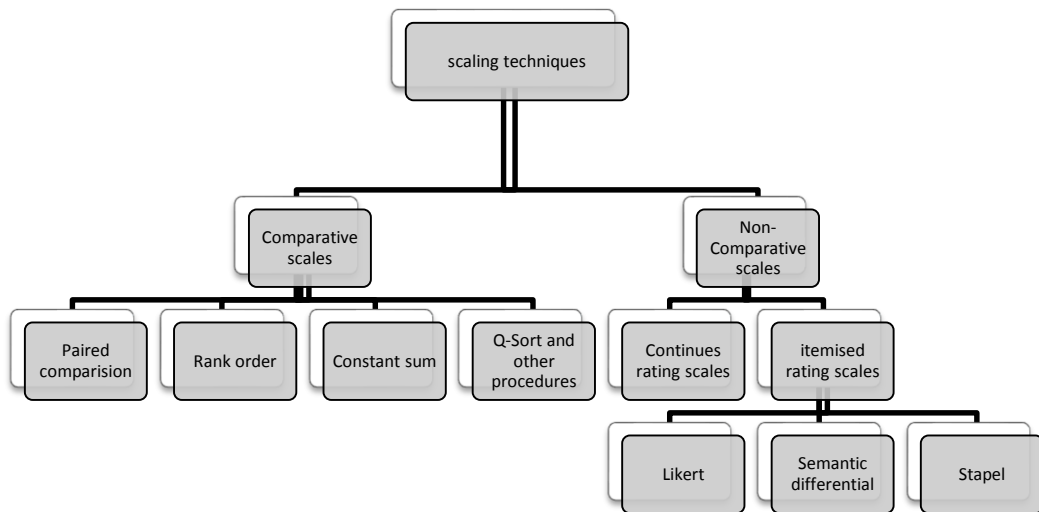
After developing the measures, the next step is the development of scaling and response formatting. Numbers are typically assigned for one of two reasons: they permit statistical analysis of the data and they simplify the communication of measurement rules and results (Malhotra et al., 2002).

A critical aspect of measurement is the description of instructions for assigning numbers to the characteristics. In addition, the instructions for assigning numbers should be standardised and applied equally. They must not change over objects or time. (Malhotra et al., 2002). It is important to determine the scale that best suits the intended measurement (Kumar et al., 1999). Various scaling techniques exist within social science and specifically, marketing research. According to Malhotra et al. (2002), the scaling methods commonly employed in marketing research can be categorised into comparative and non-comparative scales (Figure 4-2).

Comparative scales comprise the direct comparison of stimulus objects. In comparative scales, data must be interpreted in relative terms and have only ordinal or rank order properties. For this reason, comparative scaling is also understood to be non-metric scaling (Malhotra et al., 2002). As shown in Figure 4-3, comparative scales include paired comparison, rank order, constant sum scales, Q-Sort and other procedures. The main advantage of comparative scaling is that minor differences between stimulus objects can be identified. As they compare the stimulus objects, respondents are required to choose reference points (Malhotra et al., 2002). Therefore, comparative scales are simply understood and can be applied easily.

Other benefits of these scales are that they contain fewer theoretical assumptions and they tend to reduce carry-over effects from one judgment to another. The main weaknesses of comparative scales are the ordinal nature of data and the incapability to generalise beyond the stimulus objects scaled (Malhotra et al., 2002).

Figure 4-3 Classification of scaling techniques



Source (Malhotra et al., 2002)

In non-comparative scales, referred to as monadic or metric scales, each item is scaled independently of others in the stimulus set. The resulting data are generally assumed interval or ratio scales. As can be seen in Figure 4-3 non-comparative scales can be additionally classified as Likert, Semantic differential, or Stapel scales. Non-comparative scaling is the most widely used scaling technique in marketing research (Malhotra et al., 2002). Among these scaling techniques, the Semantic Differential Scale and the Likert Scale are considered reliable (Blakie, 2000), and are the most common scaling techniques used in marketing research (Aaker et al., 2004).

The Semantic Differential Scale is bipolar, relates to the attitude object, while the Likert Scale is unipolar, and includes complete statements (Burns & Bush, 2006). Choosing between the Likert Scale and the Semantic Differential Scale is dependent on the information requirements of the study, the characteristics of the respondents and the methods of administration (Tull & Hawkins, 1990). The Likert Scale was used within this study (Table 4-1) due to its relative simplicity to construct and manage. In addition, respondents readily understand how to use this scale, as it is a frequently used scale that requires the respondents to specify a degree of agreement or disagreement with each of a series of statements about the objects (Albaum, 1997; Malhotra et al., 2002).

The number of scale categories depends on several factors. Although the larger the number of scale categories, the better is the discrimination that can be achieved among stimulus objects, this also depends on respondent's knowledge (Malhotra et al., 2002). If the respondents are interested in the scaling task and are familiar with the objects, a larger number of categories may be employed. On the other hand, if the respondents are not very familiar or involved with the task, fewer categories should be used. Similarly, the nature of the objects is also relevant. Some objects do not lend themselves to finding discriminations, so a small number of categories are adequate. Another important factor is the data collection method. If telephone interviews are involved, a large number of categories may confuse the respondents. Similarly, space limitations may limit the number of categories in mail surveys (Malhotra et al., 2002).

Following careful consideration of the options, this study adopted a seven point Likert scale (see Table 4-1) for reasons such as: the respondents are educated managers who can recognise the differences between scales, there are no

significant time and space limitations associated with using a large number of scale categories in internet surveys (Malhotra, 2006), and the seven point Likert Scale has been extensively used in previous research (e.g., Morgan et al., 2009; Ngo & O’Cass, 2009; Vorhies et al., 2009; Sok & O’Cass, 2011). Moreover, seven point Likert scale had been used – for instance by Luca & Atuahene-Gima, 2007; Zhou et al., 2008; Jansen et al., 2006; Vorhies et al., 2010 - for measurement of the same constructs as were adopted by this study.

Table 4-1 presents the scale poles of constructs that were chosen. Items relating to exploratory service innovation, exploitative service innovation, branding capabilities, and market orientation were measured via a seven-point scale with scale poles ranging from “strongly disagree” to “strongly agree”. Concerning the constructs of market knowledge, items pertaining to the market knowledge depth were measured via a seven-point scale with scale poles ranging from “shallow” to “deep” and “basic” to “advanced”. Items relating to market knowledge breadth were measured via a seven-point scale with scale poles ranging from “limited” to “wide ranging”, “narrow” to “broad”, and “specialised” to “general”. Regarding the construct of new service performance, items pertaining to marketing performance were measured via a seven-point scale with scale poles ranging from “not at all” to “very much so”. Regarding the measurement of control variables, items pertaining to competitive intensity and market growth were measured via a seven-point scale poles ranging from “strongly disagree” to “strongly agree”.

Table 4-1 Scale poles of research constructs

Exploratory service innovation, Exploitative service innovation, Market orientation, Branding capability, Competitive intensity, Market growth						
Strongly disagree						Strongly agree
1	2	3	4	5	6	7
New service performance						
Not at all						Very much so
1	2	3	4	5	6	7
Market knowledge breadth						
Limited						Wide ranging
1	2	3	4	5	6	7
Narrow						Broad
1	2	3	4	5	6	7
Specialised						General
1	2	3	4	5	6	7
Market knowledge depth						
Shallow						Deep
1	2	3	4	5	6	7
Basic						Advanced
1	2	3	4	5	6	7

Step 3: Draft Survey

As described above and summarised in Table 4-2, existing measures identified from the literature comprised a total of 47 items that had previously been proven to be valid and reliable measures. These 47 items represented the seven constructs: exploratory service innovation, exploitative service innovation, branding capability, market knowledge depth, market knowledge breadth, market orientation, and new service performance.

Table 4-2 Initial item pool: Constructs and number of corresponding items

Constructs	Number of items
New service performance	5
Exploratory service innovation	6
Exploitative service innovation	6
Market knowledge depth	4
Market knowledge breadth	6
Branding capability	12
Market orientation	8
Total	47

In addition to the seven constructs, a number of items relating to respondent confidence and knowledge in concerning all items in the survey and providing demographic characteristics of the firm were included. According to Vorhies et al. (2009), this study used three specific questions to assess the respondent's knowledge, confidence and involvement in new service development process. The first question was asked in the beginning of the survey to clarify the respondent's knowledge of their firm's business strategy, characteristics, process, performance and environment. The second question was asked at the end of the survey to identify the respondent's confidence in possessing the necessary knowledge to complete the statements asked throughout the survey. The third question, also placed at the end of the survey, identified the level of the respondent's involvement in new service development process. Questions relating to the level of respondents' knowledge and involvement were designed in seven-point Likert scale. The data from respondents who answered below five to these questions was subsequently eliminated from the data analysis procedure.

Moreover, three firm demographic items - the number of employees, the organisation activity and the brand strategy (new brand strategy or brand extension strategy) that firm employs for a specific new service - were included in the survey.

The question relating to brand strategy of the service firm for a specific new service was used to classify the sample into two groups based on firm's brand strategy. Finally, four demographic items specific to the respondent were included at the end of the survey. These items consisted of the respondent's current position, length of current tenure in that position, the length of experience in current organisation, and the length of experience in current industry.

The physical layout of the survey is a vital factor in the design stage. The layout influences the application and efficiency of the survey administration (Aaker et al., 2004). Thus, designing the sequence of questions and question instructions were addressed at this stage. The clarity and simplicity of instructions were checked to minimise potential mistakes for pre-testing.

Step 4: Expert-judges of face validity

According to Malhotra et al. (2002) face validity is a subjective, but organised assessment of how well the content of a scale denotes the measurement task. The researcher observes whether the scale items effectively cover the entire domain of the construct being measured (Malhotra et al., 2002). In this study, five expert judges were invited to participate in the face validity assessment process: three late stage PhD candidates in marketing, and two senior academics in marketing. They were asked to assess the consistency between the definition and the measurement of the constructs. Of the 57 initial items, only one item in the measurement of new service performance related to response to competitive pressure was eliminated from the item pool as a result of suggestions and comments from these expert judges. Finally, 56 items were retained in the refined item pool. Then the survey was ready for pre-testing.

Table 4-3 Number of items in draft survey

Constructs	Number of items
New service performance	4
Exploratory service innovation	6
Exploitative service innovation	6
Market knowledge depth	4
Market knowledge breadth	6
Branding capability	12
Market orientation	8
Respondent's confidence & involvement	3
Firm's characteristics	3
Respondent's demographic	4
Total	56

Step 5: Pre-test

Pre-testing involves testing the survey on a small sample of respondents to recognise and remove possible problems (Martin & Polivka, 1995). Even the best survey can be improved by pre-testing. As a common rule, a survey should not be used in a field survey without suitable pre-testing (Malhotra, 1997). After developing and purifying the measures and assessment of face validity, a pre-test should be undertaken prior to implementing the major project (Krueger & Casey, 2000). Through the process of pre-testing any question, scale or instruction that is unclear or ambiguous to the respondents can be changed. In this way the survey can be improved for better readability and optimal data quality (Dezin & Lincoln, 1998).

According to Malhotra et al. (2002), a pre-test should be extensive, testing all parts of the survey including question content, wording, sequence, question difficulty and the instructions. The respondents chosen to participate in the pre-test should be comparable to those who will be involved in the actual survey, in terms

of characteristics, attitude and behaviours of interest. In other words, respondents for the pre-test and for the actual survey should be drawn from the same population.

Some scholars conduct pre-testing via quantitative assessment (e.g., Churchill, 1979; Spector, 1992), while others conduct it via qualitative assessment (e.g., Czaja, 1998; Presser et al., 2004). As the qualitative pre-test has been widely used in previous relevant studies (e.g., Zhou et al., 2005; Ngo & O'Cass, 2009), this study also used a qualitative pre-test. Ten senior managers of service firms in Tasmania were identified and invited to participate in the pre-test, due to it being possible to conduct face-to-face interviews with them locally. Their contact details were acquired from the IncNet Business Database. Initially they were contacted via phone to seek their consent for participation in the pre-testing and the appointments were made. Then in the interview sessions with each of them, the senior managers discussed their opinion about survey format, item duplication, question sequence and any other points related to items interpretation.

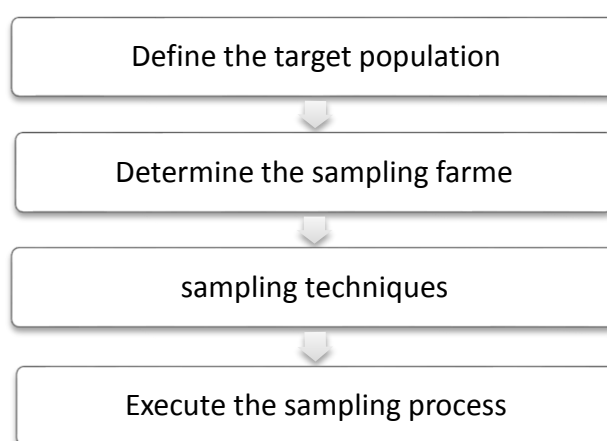
Although no item was eliminated in this stage, the results of feedback from pre-testing led to changes in the wording of some items that respondents felt were duplicated or interrelated in other ways. Also some minor changes in formatting and question sequences were made after receiving feedback. Following the pre-testing, the original five expert judges were again consulted to ensure the content validity of all constructs had not been compromised as a result of changes adopted from pre-test. The judges indicated that the revised item pool was acceptable.

II. Sampling plan

The sampling plan, as shown in Figure 4-3, contains four steps, including determining the population from which the sample is drawn (step 1), developing

the sampling frame (step 2), determining the sampling method (step 3), and developing the sample plan and execution (step 4) (e.g., Tull & Hawkins, 1990; Hussey & Hussey, 1997). These steps are interconnected and relevant to all aspects of marketing research projects, from problem definition to the presentation of the results. Therefore, sampling plan decisions should be integrated with all other decisions in a research project (Malhotra et al., 2002).

Figure 4-4 Sampling plan process



Source: adapted from Malhotra et al. (2002).

Step 1: Define the target population: Sampling design begins with identifying the target population. The target population is the group of elements or objects that possess the information sought by the researcher and about which inferences are to be made. The target population must be defined accurately. Describing the target population comprises translating the problem definition into a detailed statement of who should and who should not be included in the sample (Malhotra et al., 2002). In this study, the target population was defined as medium and large service firms in Australia that have introduced at least one new service to the market in the past three years. The reason to choose medium and large service firms was to

ensure that the service firms are large enough to have introduced a new service to the market recently. According to Coviello, Brodie, and Munro (2000), the approaches taken by smaller firms to market planning and marketing activities differ significantly from large firms, in that formal market plans are less common and are more short-term in small firms. It was deemed appropriate that in testing the research model and hypotheses discussed in Chapter 3, participant firms should answer the survey regarding a specific new service of their firms in the past three years.

Step 2: Determine the sampling frame: A sampling frame is a representation of the elements of the target population. It involves a list of instructions for recognising the target population. Telephone book, an association directory listing the firms in an industry, a mailing list purchased from a commercial organisation, a city directory and map are some example of a sampling frame (Malhotra et al., 2002).

Due to budget constraints, it was not possible to survey all the service firms in Australia that might meet the selection criteria, therefore a list of 1500 service firms was ordered. The sampling frame included service firms from those states in Australia where the majority of medium and large service firms are located - NSW and Victoria. The sample frame contained service firms from a variety of service sectors, not only to provide a reasonable number of firms for data analysis, but also to be wide enough for the result to be generalisable (O'Cass & Ngo, 2010). In

addition, the sample frame included only medium and large service firms, defined by the Australian Bureau of Statistics as firms with more than 20 employees¹.

The specific respondents in this study were senior managers and the CEO in each service firm. Scholars of RBV (e.g., Morgan et al., 2009; Vorhies et al., 2009), performance (e.g., Calantone et al., 2002; Newbert, 2007), and strategy literature have tended to focus on the perspectives of management. Senior managers are appropriate persons to respond to questions relating to innovation and firm performance as they are in a position to have access to reliable information (Morgan et al., 2009; Ngo & O’Cass, 2009).

Subjective performance indicators were used in this study for the comparison of performance differentials across industries and economic conditions (Achtenhagen et al., 2010). In addition, comparison among firms in different market situations can be applied by subjective measurement (Ledwith, 2000). Also, as subjective measures show the perceptions of respondents regarding their decision-making processes, it is useful for comparison across firms, industries, economic conditions and goals (Song & Parry, 1997).

Step 3: Sampling technique: To obtain a list of 1500 service firms, the list provider made a list of all service firms located in NSW and Victoria with more than 20 employees. Then Sampling was implemented by selecting every eleventh service firm in an alphabetically sorted list (Sok & O’Cass, 2011) from the IncNet Business Database until 1500 were identified (consistent with the budget).

¹ According to the Australian Bureau Statistics’ 2001 definition, small business is defined as a business employing less than 20 people. Medium businesses is defined as businesses employing 20 or more people, but less than 200 people; and large businesses are defined as businesses employing 200 or more people.

Step 4: Execute the sampling process: Due to estimated low response rate for online surveys (e.g., O’Cass & Ngo, 2011) all 1500 service firms in the sample list were contacted to increase the response rate. Initial contact and follow-up were done via telephone and email respectively to invite and gain the agreement to participation in this study. The initial telephone contact also confirmed whether or not the firm met the study selection criteria. Selection criteria in this study are medium and large service firms, activity in the service industry and having introduced at least one new service to the market in the past three years.

As mentioned earlier, senior managers and CEOs were chosen as the key informants for this study due to their roles in strategic decision making and strategy implementation (Ibeh, Brock, & Zhou 2004; Luca & Atuahene-Gima, 2007; Vorhies & Morgan, 2003). In the initial contact with 1500 service firms, 210 service firms agreed to participate in the study, however, 55 service of these were eliminated from the sample, as they had not introduced at least one new service to the market in the past three years. The link to the web-based survey on Survey Monkey was sent to the email address of the CEO of each of the 155 service firms who agreed to participate in this study and met the selection criteria. Finally, a total number of 128 usable surveys were obtained and prepared for data analysis.

III. Data Analysis Technique

Since this study employs quantitative research using surveys to gather empirical data, a range of statistical methods were chosen to analyse the data (Hussey & Hussey, 1997). After data collection, a purification process involving reliability and validity assessment was applied (Byrne, 2001).

As discussed in Chapter 3, this study focuses on the moderating role of brand strategies on the relationships between research constructs. To test the moderating role of brand strategies, Subgroup analysis is used. Subgroup analysis is an appropriate technique to test for moderation when the moderator variable is categorical. This approach has been followed by scholars such as Olson et al. (2005) and Matsuno and Mentzer (2000). According to Vinzi (2010) when the moderator variable is categorical, it can be used as a grouping variable without further refinement. Once the observations are grouped, the model with the direct effects is estimated separately for each group of observations. Differences in the model parameters between the different data groups are interpreted as the moderating effects (Vinzi, 2010).

4.3.3. Implementation Phase

The last stage in the planning of research, as shown in Figure 4-1 above, is implementation. Research costs and timing were predicted before conducting the research in Australia. A budget plan was developed to estimate the costs and ensure that the research would be financially feasible. The budget plan includes the cost of purchasing the database, the cost of survey design in Survey Monkey, gift, and telephone call expenses in Australia. The budget for the current research is shown in Table 4-5.

Figure 4-5 Budgeting for data collection

Items	Explanation	Expenses (Aud)
Database	The details of 1500 service firms was purchased from IncNet business data base	\$2310
Survey design	The cost of membership in Survey Monkey to access the survey design and reports	\$300
Telephone expenses	Potential respondents (1,500) were initially contacted via phone to seek for their participation in the study	\$100
gifts	To encourage managers to participate and answer the survey, a draw was held for 2 iPads	\$1000
Total		3710

4.4. Conclusion

This chapter describes the research design processes and decisions to implement the study and connect the research questions and hypotheses to data. The descriptive research approach and survey method were selected as the most appropriate approach and data collection method. After completing all steps of measurement and scaling, seven focal constructs were measured using 46 items. The final web-based survey was sent to 155 medium and large Australian service firms with more than 20 employees and which had introduced at least one new service in the past three years to the market. Finally, a total of 128 usable survey responses was obtained. The next chapter will discuss the data analysis techniques applied to the survey responses and the findings that resulted from the survey.

Chapter 5 - DATA ANALYSIS AND FINDINGS

5.1. Introduction

The objectives for this chapter are to outline the data analysis strategy and the procedures employed to analyse the survey data, examine the validity of the measures of constructs underpinning the model proposed in Chapter 3, and present the data analysis results. This chapter includes preliminary data analysis outlining the profile of the sample, non-response bias tests and the descriptive statistics. This chapter also presents the partial least squares analysis used to assess validity of measurement models and the results of the analysis produced using Smart-PLS software.

5.2. Preliminary Data Analysis

Preliminary data analysis produces results from profiling the sample, the non-response bias tests and the descriptive statistics. As discussed in Section 4.3.4, a total of 128 usable surveys were obtained via the web-based survey. At the conclusion of the data collection, 128 out of the 155 distributed useable surveys was obtained. This entailed a response rate of 82%, which is acknowledged as a satisfactory response in the context of the web-based approach for survey administration (e.g., O'Cass & Ngo, 2011). As shown in Table 4-4, the final survey of this study consisted of 56 items. Two items pertained to respondents' knowledge confidence, one item pertained to respondents' involvement in the organisation processes, four items pertained to respondents' demographic characteristics, three items pertained to firms' characteristics, and 46 items pertained to the constructs in

the study. The preliminary analysis, which will be discussed in the following sections, includes two stages: identifying the profiles of the sample based on demographic items of firms and individual respondent, and identifying the results of the descriptive statistics of the 46 items for the seven constructs, including means and standard deviations, skewness and kurtosis of items.

5.2.1. Profile of the sample

The profile of the sample describes the characteristics of service organisations and individual respondents that were surveyed. The service organisation demographic characteristics include the main activity of the organisation, the number of employees and the brand strategy that the firm deployed for the specific new service. The individual demographic items include the respondent's length of experience in a current position, respondent's length of experience in current organisation, respondent's length of experience in the current industry.

As presented in Table 5-1, the sample profile indicated that health care services accounted for 23.3% of the firms surveyed, finance and insurance 22.7%, accommodation and restaurant 11.3%, personal services 8%, media and communication 8.7%, transport and storage 7.3%, education 6%, management and administration 6%, retail and wholesale 4.7%, and property services 2%. Profiling also indicated that 71.1% of the service organisations surveyed had 20 to 500 employees, 21.7% had 501 to 1000 employees, and 7.2% had over 1000 employees. In terms of branding strategy in use by the firms in the past three years and reported on for this study, 60 service firms introduced a new service to the market under a new brand name (using new brand strategy) and 63 service firms introduced a new service under a previous brand name (using brand extension strategy).

Table 5-1 Sample Profile: Organisation characteristics

Variable	Category	Percentage
Service industry sector	Health and community services	23.3%
	Finance and Insurance	22.7%
	Accommodation, Cafe and Restaurants	11.3%
	Media and communication	8.7%
	Personal services	8%
	Transport and Storage	7.3%
	Education	6%
	Management and administration	6%
	Retail and wholesale trade	4.7%
	Property services	2%
Firm size	20-500 Employees	71.1%
	500 to 1000 Employees	21.7%
	Over 1000 Employees	7.2%
Branding strategy	New brand strategy	60
	Brand extension strategy	63

The sample profile also showed that 40% of the respondents had more than 10 years experience in the current position, 50% had more than 10 years experience in their current organisation, and 76.9% had more than 20 years experience in the service industry. The degree of respondent knowledge was measured through a question about the extent to which respondents believe that they are knowledgeable about their firm's business operation, strategies, business processes, performance and environment. Respondents answered on a seven-pole scale from "not at all" to "very much so". Results showed that 75.5% believed that they were broadly knowledgeable about the business operations, strategies, business process, performance, and business environment. Only three respondents rated their level of knowledge below five out of seven and consequently those particular survey responses were excluded from further analysis (Morgan et al., 2009). In terms of respondent involvement in the new service development in their firm, more than 50% of respondents believed that they were broadly involved in new service development. Only two people rated their involvement in new service development below five out seven and consequently those particular survey responses were

excluded from further analysis. Following profiling and this preliminary analysis, 123 surveys were subjected to the data analysis process.

5.2.2. Descriptive statistics results

The constructs measured in this study include exploratory service innovation, exploitative service innovation, market knowledge depth, market knowledge breadth, market orientation, branding capability and new service performance. Each construct was measured via multi-item scales. The descriptive statistics analysis was undertaken using central tendency (i.e., mean) and dispersion (i.e., standard deviation, skewness, and kurtosis) for all items in each construct.

Exploratory service innovation was measured using seven items - labelled ICR1 to ICR7 - which were drawn from Jansen et al. (2006). As shown in Table 5-2, the descriptive statistical analysis resulted in mean scores ranging from 4.54 to 5.5 and standard deviations (SD.) ranging from 1.20 to 1.67. Furthermore, scores on skewness (from -1.00 to -0.26) and kurtosis (from -0.67 to 0.70) indicated that all seven exploratory service innovation items demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-2 Descriptive statistic results for exploratory service innovation

Exploratory service innovation	Mean	SD.	Skewness	Kurtosis
ICR1...accept demands that go beyond existing services.	5.50	1.20	-.75	.08
ICR2...invent new services.	5.51	1.28	-.85	.70
ICR3...experiment with new services in local market.	5.29	1.31	-.62	.23
ICR4...commercialise services that are completely new to firm.	4.73	1.67	-.40	-.67
ICR5...frequently utilise new opportunities in new markets.	4.93	1.39	-.56	.09
ICR6...regularly use new distribution channels.	4.54	1.58	-.26	-.56
ICR7...regularly search for and approach new clients in new markets.	5.33	1.56	-1.00	.43

Exploitative service innovation was also measured using seven items - labelled ICI1 to ICI 7 - which were drawn from Jansen et al. (2006). As shown in Table 5-3, the descriptive statistical analysis resulted in mean scores ranging from 5.61 to 6.04 and standard deviations (SD.) ranging from 0.89 to 1.19. Furthermore, scores on skewness (from -1.30 to -0.68) and kurtosis (from 0.42 to 2.77) indicated that all seven exploitative service innovation items, except kurtosis for ICR (2.77), demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-3 Descriptive statistic results for exploitative service innovation

Exploitative service innovation	Mean	SD.	Skewness	Kurtosis
ICI1... refining the provision of existing services.	5.83	1.03	-1.07	1.92
ICI2...regularly implement small adaptations to existing services.	6.04	.92	-.94	.86
ICI3...introduce improvements in existing services for local market.	6.04	.89	-1.22	2.77
ICI4...improve the efficiency of current services.	6.03	.96	-1.07	1.59
ICI5...increase economies of scale in existing services.	5.61	1.09	-.68	.42
ICI6...expand services for existing clients.	5.69	1.19	-.95	.97
ICI7...lowering the cost of internal processes is an important objective.	6.03	1.08	-1.30	1.55

Market knowledge depth was measured using four items - labelled MD1 to MD4 - which were drawn from Luca and Atuahene-Gima (2007). As shown in Table 5-

4, the descriptive statistical analysis resulted in mean scores ranging from 4.39 to 5.51 and standard deviations (SD.) ranging from 1.12 to 1.51. Furthermore, scores on skewness (from -0.84 to -0.13) and kurtosis (from -0.64 to 0.98) indicated that all four market knowledge depth items demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-4 Descriptive statistic results for market knowledge depth

Market knowledge depth	Mean	SD.	Skewness	Kurtosis
MD1... firm's knowledge of competitors' strategies.	4.40	1.43	-.13	-.64
MD2...firm's knowledge of firm's customers.	5.51	1.12	-.37	-.41
MD3...firm's knowledge of competitors' strategies.	4.39	1.51	-.16	-.54
MD4...firm's knowledge of firm's customers.	5.50	1.21	-.84	.98

Market knowledge breadth was measured using six items - labelled MB1 to MB4 - which were drawn from Luca and Atuahene-Gima (2007). As shown in Table 5-5, the descriptive statistical analysis resulted in mean scores ranging from 4.08 to 5.63 and standard deviations (SD.) ranging from 1.07 to 1.84. Furthermore, scores on skewness (from -1.11 to -0.28) and kurtosis (from -1.15 to 2.32) indicated that all six market knowledge depth items, except kurtosis for MB2 (2.32), demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-5 Descriptive statistic results for market knowledge breadth

Market knowledge breadth	Mean	SD.	Skewness	Kurtosis
MB1...firm's knowledge of competitors' strategies.	4.98	1.35	-.62	.28
MB2...firm's knowledge of our customers.	5.63	1.15	-1.11	2.32
MB3...firm's knowledge of competitors' strategies.	4.68	1.39	-.28	-.34
MB4...firm's knowledge of our customers.	5.63	1.07	-.98	1.61
MB5...firm's knowledge of competitors' strategies.	4.23	1.59	-.41	-.68
MB6...firm's knowledge of our customers.	4.08	1.84	-.30	-1.15

Market orientation was measured using eight items - labelled MO1 to MO8, which were drawn from Zhou et al. (2008). As shown in Table 5-6, the descriptive statistical analysis resulted in mean scores ranging from 4.76 to 5.96 and standard deviations (SD.) ranging from 0.93 to 1.56. Furthermore, scores on skewness (from -1.25 to -0.67) and kurtosis (from -0.18 to 2.87) indicated that all eight market orientation items, except kurtosis for MO2 (2.87), demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-6 Descriptive statistic results for market orientation

Market orientation	Mean	SD.	Skewness	Kurtosis
MO1...business objectives are driven primarily by customer satisfaction.	5.62	1.31	-1.12	1.16
MO2...strategies driven by beliefs of how organisation creates greater value for customers.	5.85	1.03	-1.25	2.87
MO3...constant commitment to serving customer needs.	5.96	.93	-.70	.15
MO4...regularly share information concerning competitors' strategies.	4.76	1.56	-.67	-.01
MO5...a fast response to competitive actions that threaten organisation.	5.21	1.40	-.71	-.18
MO6...regularly communicate information on customer needs.	5.40	1.25	-.88	.59
MO7...frequently discuss market trends across all business functions.	5.40	1.35	-.91	.30
MO8...business functions are integrated in serving the needs of our target markets.	5.40	1.34	-.75	.08

Branding capability was measured using five items - labelled BC1 to BC5 -which were drawn from Vorhies et al. (2010). As shown in Table 5-7, the descriptive statistical analysis resulted in mean scores ranging from 4.91 to 5.78 and standard deviations (SD.) ranging from 1.08 to 1.42. Furthermore, scores on skewness (from -1.23 to -0.57) and kurtosis (from -0.19 to 1.95) indicated that all five branding capability items demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-7 Descriptive statistic results for branding capability

Branding capability	Mean	SD.	Skewness	Kurtosis
BC1.... routinely use customer insight to identify valuable brand positioning.	4.91	1.41	-.57	-.19
BC2.... consistently establish desired brand associations in consumers' minds.	5.45	1.24	-1.23	1.95
BC3.... maintain a positive brand image relative to competitors.	5.78	1.08	-1.15	1.66
BC4.... achieve high levels of brand awareness in the market on a regular basis.	5.61	1.17	-1.17	1.92
BC5.... systematically leverage customer-based brand equity into preferential channel positions.	5.41	1.42	-.92	.16

New service performance was measured using four items - labelled MP1 to MP4.

As shown in Table 5-8, the descriptive statistical analysis resulted in mean scores ranging from 4.72 to 5.00 and standard deviations (SD.) ranging from 1.11 to 1.46. Furthermore, scores on skewness (from -0.56 to -0.10) and kurtosis (from -0.22 to 0.39) indicated that all four new service performance items demonstrated normality as they fell within the acceptable ranges of -2.00 and 2.00 (DeVellis, 1991).

Table 5-8 Descriptive statistic results for new service performance

New service performance	Mean	SD.	Skewness	Kurtosis
MP1...increasing customer satisfaction.	4.94	1.11	-.10	.39
MP2...increasing customer retention.	4.72	1.25	-.12	-.22
MP3...increases the amount of new customers.	4.85	1.46	-.51	.03
MP4...increases firm competitive position in the market place.	5.00	1.32	-.56	.24

5.2.3. Non-response bias

Using the information provided in the list of firms obtained from the IncNet business database, this study examined non-response bias by comparing early vs. late respondent data (Brinckmann, Salomo, & Gemuenden, 2011). The t-test comparing the variable means of central descriptive measures (number of employees and the manager knowledge level) of these two groups indicated no significant differences between early and late respondents, showing that the non-response bias was not a serious concern for this study. The t-test results indicate that: (1) for the firm size, mean (early respondents) = 1.65 and mean (late

respondents) = 1.63 where $t = 0.07$ and (2) for management knowledge level, mean (early respondents) = 6.75 and mean (late respondents) = 6.35 where $t = 0.01$ based on interval scale measure. This suggested that a non-response bias was unlikely (Kim & Atuahene-Gima, 2010).

5.3. Partial Least Squares

This study employed the PLS-SEM analysis method to assess the adequacy and validity of measurement models, examined the predictive relevance of the framework (Figure 3-1), and tested the seven hypotheses (H1a, H1b; H2a, H2b; H3, H4a, H4b). PLS-SEM has been increasingly applied in marketing and other business disciplines (e.g., Henseler, Ringle, & Sinkovics, 2009).

PLS-SEM was adopted for four main reasons pertinent to this study. *First*, as PLS-SEM focuses on the explanation of variance using ordinal least squares, this technique is suited for the investigation of the relationship in a predictive rather than confirmatory fashion (Fornell & Bookstein, 1982; Ngo & O’Cass, 2010, Hair et al., 2012; Hair, Ringle, & Sarstedt, 2013a). In this study, the primary concern (as outlined in the hypotheses presented in Chapter 3), is by maximising the prediction of dependent endogenous constructs. *Second*, as PLS-SEM allows the examination of measures and theory simultaneously (Fornell & Booksten, 1982; Ngo & O’Cass, 2010), it was used for examining the measurement properties and hypotheses by means of two sets of linear equations, namely outer-measurement model and inner-structural model (Ngo & O’Cass, 2010, O’Cass & Sok, 2013). *Third*, some researchers view PLS-SEM as a silver bullet or panacea for dealing with empirical research challenges such as smaller sample sizes (Marcoulides & Saunders, 2006; Sosik, Kahai, & Piovosio, 2009). As indicated in Section 5.2, only 123 completed

surveys were returned and PLS-SEM is an appropriate technique for such a small sample size (Barclay, Higgins, & Thompson, 1995; Hair et al., 2011, 2013b). *Fourth*, PLS-SEM is a suitable technique in the presence of the inadequacy condition such as high kurtosis (beyond the range of ± 2) rather than symmetric distributions of manifest variables (Cassel, Hackl & Westlund, 1999). Skewness and kurtosis refer to the shape of the distribution and are analysis techniques applied to interval and ratio level data. Skewness measures the degree of symmetry of a probability distribution. Kurtosis measures the thinness of the tails of a probability. Values for skewness and kurtosis are zero if the observed distribution is exactly normal (Coakes & Steed, 2003). Positive values for skewness indicate a positive skew, while positive values for kurtosis indicate a distribution that is peaked. Negative values for skewness indicate a negative skew, while negative values for kurtosis indicate a distribution that is flatter (Coakes & Steed, 2003). As shown in Tables 5-3, 5-5, and 5-6, kurtosis for items ICR (2.77) related to exploratory service innovation, MB2 (2.32) related to market knowledge breadth, MO2 (2.87) related to market orientation, departed from normality (beyond the range of ± 2). In a situation such as high kurtosis ($> \pm 2$), PLS-SEM is a suitable analysis technique (Cassel et al., 1999). For these reasons Smart-Pls software was deemed suitable for assessing the validity of measurement models and testing the hypotheses in this study.

5.4. Outer-Measurement Model Results

The outer-measurement model specifies the relationships between observed indicators and their respective constructs (Falk & Miller, 1992; Hulland, 1999; Ngo & O'Cass, 2010). Individual indicator loadings, composite reliability, the average variance extracted (AVE), bootstrapped t-statistic, convergent validity, and

discriminant validity are used to assess the adequacy of the outer-measurement models (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001; Hair et al., 2011).

Individual item loading signifies the share variance between the construct and a respective item (Hulland, 1999; Chin et al., 2003). Composite reliability is an estimate of the internal consistency of items predicted to measure a single construct (Hair et al., 2011). Composite reliability does not assume that all items are equally reliable. It prioritises items according to their reliability during model estimation (Hair et al., 2011). The average variance explained (AVE) denotes the average variance shared between items and their respective construct (Fornell & Larcker, 1981). Bootstrapping is a method to conduct repeated random sampling with replacement from the original sample to make a bootstrap sample for estimating the precision of the outer-measurement model (Hulland, 1999, Hair et al., 2011). This study computed bootstrapped t-values based on 5000 bootstrapping runs, as recommended by Hair et al. (2012).

Exploitative service innovation's outer-measurement model results provided in Table 5-9 show that the loadings for all items ranged from 0.56 to 0.84 and were therefore greater than the cut-off value of 0.50 recommended by Hulland (1999). The bootstrapped t-values for all items ranged from 6.79 to 27.43 and were therefore greater than the cut-off value of ± 1.96 recommended by Ngo and O'Cass (2010). These results indicated that all exploitative service innovation items had satisfactory explanatory power. In addition, the composite reliability of 0.90 was greater than the cut-off value of 0.70 recommended by Nunnally (1978) and the AVE of 0.57 was greater than the cut-off value of 0.50 recommended by Hair et al. (2012).

Table 5-9 Outer-measurement model results for exploitative service innovation

Exploitative service innovation	AVE: .57	Composite Reliability: .90	Loading	t-Value
ICI1... refining the provision of existing services.			.83	20.52
ICI2...regularly implement small adaptations to existing services.			.83	27.43
ICI3...introduce improvements in existing services for local market.			.84	24.94
ICI4...improve the efficiency of current services.			.79	19.04
ICI5...increase economies of scale in existing services.			.65	9.25
ICI6...expand services for existing clients.			.60	8.72
ICI7...lowering the cost of internal processes is an important objective.			.56	6.79

Exploratory service innovation's outer-measurement model results provided in Table 5-10 show that the loadings for all items (except ICR1) ranged from 0.68 to 0.82 were therefore greater than the recommended cut-off value (> 0.50),. Loading for ICR1 (0.40) was less than the recommended cut-off value (0.50) and therefore item ICR1 was removed. The bootstrapped t-values for all items ranged from 11.23 to 23.42 and were therefore greater than the recommended cut-off value ($> \pm 1.96$). These results indicated that all items had satisfactory explanatory power. In addition, composite reliability of 0.86 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.73 was also greater than the cut-off value (> 0.50), as recommended by Hair et al. (2012).

Table 5-10 Outer-measurement model results for exploratory service innovation

Exploratory service innovation	AVE: .50	Composite Reliability: .86	Loading	t-Value
ICR1...accept demands that go beyond existing services.			.40	4.21
ICR2...invent new services.			.81	19.43
ICR3...experiment with new services in local market.			.75	13.56
ICR4...commercialise services that are completely new to firm.			.73	14.92
ICR5...frequently utilise new opportunities in new markets.			.82	23.42
ICR6...regularly use new distribution channels.			.68	11.23
ICR7...regularly search for and approach new clients in new markets.			.68	12.20

Market knowledge depth's outer-measurement model results provided in Table 5-11 show that the loadings for all items ranged from 0.75 to 0.84 and were therefore greater than the recommended cut-off value (> 0.50). The bootstrapped t-values for all items ranged from 10.38 to 24.10 and were therefore greater than the recommended cut-off value ($> \pm 1.96$). These results indicated that all items had satisfactory explanatory power. In addition, composite reliability of 0.87 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.64 was also greater than the cut-off value (> 0.50), as recommended by Hair et al. (2012).

Table 5-11 Outer-measurement model results for market knowledge depth

Market knowledge depth	AVE: .64	Composite Reliability: .87	Loading	t-Value
MD1... firm's knowledge of competitors' strategies.			.82	20.95
MD3...firm's knowledge of firm's customers.			.84	24.10
MD2...firm's knowledge of competitors' strategies.			.76	11.58
MD4...firm's knowledge of firm's customers.			.75	10.38

Market knowledge breadth's outer-measurement model results presented in Table 5-12 show that the loadings for all items (except MB5 and MB6) ranged from 0.77 to 0.83 and were therefore greater than the recommended cut-off value (> 0.50). The loading of items MB5 (-0.4) and MB6 (-0.22) were less than the recommended cut-off value (0.50). In addition, the bootstrapped t-values of these items fell below

the satisfactory t-value benchmark (± 1.96) and consequently items MB5 and MB6 were removed from further analysis. The bootstrapped t-values for all other items ranged from 9.97 to 26.55 and were therefore greater than the recommended cut-off value ($>\pm 1.96$). These results indicated that all remaining items had satisfactory explanatory power. In addition, composite reliability of 0.87 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.63 was also greater than the cut-off value (> 0.50), as recommended by Hair et al. (2012).

Table 5-12 Outer-measurement model results for market knowledge breadth

Market knowledge breadth	AVE: .63	Composite Reliability: .87	Loading	t-Value
MB1...firm's knowledge of competitors' strategies.			.83	26.55
MB3...firm's knowledge of our customers.			.81	22.14
MB2...firm's knowledge of competitors' strategies.			.78	9.97
MB4...firm's knowledge of our customers.			.77	15.21
MB5...firm's knowledge of competitors' strategies.			-.04	0.24
MB6...firm's knowledge of our customers.			-.22	1.62

Market orientation's outer-measurement model results presented in Table 5-13 show that the loadings for all items ranged from 0.58 to 0.77 and were therefore greater than the recommended cut-off value (> 0.50). The bootstrapped t-values for all items ranged from 7.64 to 19.90 and were therefore greater than the recommended cut-off value ($>\pm 1.96$). These results indicated that all items had satisfactory explanatory power. In addition, composite reliability of 0.89 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.53 was also greater than the cut-off value (> 0.50), as recommended by Hair et al. (2012)

Table 5-13 Outer-measurement model results for market orientation

Market orientation	AVE: .53	Reliability: .89	Loading	t-Value
MO1...business objectives are driven primarily by customer satisfaction.			.58	7.64
MO2...strategies driven by beliefs of how organisation creates greater value for customers.			.74	11.84
MO3...constant commitment to serving customer needs.			.70	13.67
MO4...regularly share information concerning competitors' strategies.			.62	9.48
MO5...a fast response to competitive actions that threaten organisation.			.74	19.90
MO6...regularly communicate information on customer needs.			.77	18.41
MO7...frequently discuss market trends across all business functions.			.74	18.58
MO8...Business functions are integrated in serving the needs of our target markets.			.74	18.90

Branding capability's outer-measurement model results presented in Table 5-14 show that the loadings for all items ranged from 0.77 to 0.86 and were therefore greater than the recommended cut-off value (> 0.50). The bootstrapped t-values for all items ranged from 8.73 to 30.66 and were therefore greater than the recommended cut-off value ($> \pm 1.96$). These results indicated that all items had satisfactory explanatory power. In addition, composite reliability of 0.91 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.68 was also greater than the recommended cut-off value (> 0.50), as recommended by Hair et al. (2012).

Table 5-14 Outer-measurement model results for branding capability

Branding capability	AVE: .68	Composite Reliability: .91	Loading	t-Value
BC1... routinely use customer insight to identify valuable brand positioning.			.77	8.73
BC2... consistently establish desired brand associations in consumers' minds.			.86	30.66
BC3... maintain a positive brand image relative to competitors.			.82	18.51
BC4... achieve high levels of brand awareness in the market on a regular basis.			.81	15.46
BC5... systematically leverage customer-based brand equity into preferential channel positions.			.83	24.93

New service performance's outer-measurement model results presented in Table 5-15 show that the loadings for all items ranged from 0.82 to 0.90 and were therefore greater than the recommended cut-off value (> 0.50). The bootstrapped t-values for all items ranged from 16.30 to 50.51 and were therefore greater than the recommended cut-off value ($> \pm 1.96$). These results indicated that all items had satisfactory explanatory power. In addition, composite reliability of 0.91 was greater than the recommended cut-off value (> 0.70) and the AVE of 0.73 was also greater than the cut-off value (> 0.50), as recommended by Hair et al. (2012).

Table 5-15 Outer-measurement model results for new service performance

New service performance	AVE: .73	Reliability: .91	Loading	t-Value
MP1...increasing customer satisfaction.			.83	22.60
MP2...increasing customer retention.			.85	22.29
MP3...increases the amount of new customers.			.90	50.51
MP4...increases firm competitive position in the market place.			.82	16.30

5.4.1. Convergent validity

Convergent validity represents the degree to which an item is associated with its respective construct (Hulland, 1999; Hair et al., 2011). The convergent validity of the outer-measurement models is assessed by calculating the composite reliability and AVE for each construct. Although the Cronbach's alpha is the most common measure of internal consistency reliability, it is limited by the assumption that all indicators are equally reliable (tau-equivalence), and efforts to maximise it can seriously compromise reliability (Raykov, 2007; Hair et al., 2011). By contrast, composite reliability does not assume tau-equivalence, making it more suitable for PLS-SEM, which prioritises indicators according to their individual reliability (Hair et al., 2011). The assessment of convergent validity using composite reliability - following Nunally's (1987) criteria which has been widely adopted by

scholars (e.g. Ngo & O’Cass, 2010; O’Cass & Weerawardena, 2010) – occurs where a 0.7 threshold has been set as a minimum. As shown in Tables 5-9 to 5-15 the composite reliabilities ranged between 0.82 and 0.91 for all constructs (exploitative service innovation, exploratory service innovation, market knowledge depth, market knowledge breadth, market orientation, branding capability, and new service performance) and thus fell within a generally accepted level.

In addition, following Fornell and Lacker’s (1981) criteria for a satisfactory convergent validity, AVE should exceed 0.50. As reported in Table 5-9 to 5-15 the results for AVE ranged from 0.50 to 0.73 for all constructs (exploitative service innovation, exploratory service innovation, market knowledge depth, market knowledge breadth, market orientation, branding capability, and new service performance) and thus meet the Fornell and Lacker (1981) criteria, exhibiting satisfactory convergent validity.

5.4.2. Discriminant validity

Discriminant validity signifies the degree to which items of a construct are different from items of other constructs within a model (Hulland, 1999). According to suggestions by some scholars (Gaski & Nevin, 1985; O’Cass & Ngo, 2007; Ngo & O’Cass, 2010; Sok, 2012), the satisfactory discriminant validity among constructs is obtained when the correlation between two constructs is not higher than their respective reliability estimates. An examination of the findings reported in Table 5-16 demonstrates that none of the individual correlations, which ranged from -0.05 to 0.74, were higher than their respective reliabilities, which ranged from 0.86 to 0.91, indicating the discriminant validity was satisfactory.

Table 5-16 Evidence of discriminant validity for the constructs

Constructs	Reliability	Market orientation	Market knowledge depth	Market knowledge breadth	Exploratory service innovation	Exploitative service innovation	Branding capability	New service performance
Market orientation	.89	1						
Market knowledge depth	.87	.54	1					
Market knowledge breadth	.87	.56	.74	1				
Exploratory service innovation	.86	.54	.39	.39	1			
Exploitative service innovation	.90	.56	.40	.42	.58	1		
Branding capability	.91	.60	.41	.35	.44	.36	1	
New service performance	.91	.40	.25	.22	.31	.28	.34	1

Note: All correlations are significant at $p < .05$

5.5. Inner-Structural Model

The inner-structural model specifies the relationships between constructs. With respect to the predictive relevance of individual paths, the strength and significance of individual paths were computed for testing the hypotheses. To be precise, beta coefficients, t-values, individual path variance, along with R^2 for each endogenous construct were calculated. This study follows the lead of others who have assessed the characteristics of the individual strategy types (e.g., Dvir Segev, & Shenhar, 1993; McDaniel & Kolari, 1987; McKee, Rajan, & Pride, 1989; Slater & Olson, 2001) by conducting the analyses within each strategy type. The mechanics of this procedure are as follows. The sample was divided into two brand strategy groups. For each subsample, a covariance matrix was calculated, and the parameters were

estimated for each subsample by SmartPLS. More specifically, the pairwise comparison was based on the β coefficient differences between relationships effects. Also, in testing the hypotheses, hierarchical regression analysis was used after controlling for competitive intensity and market growth as control variables. This approach was based on a procedure similar to that used by Vorhies and Morgan (2003) and Olson et al. (2005). In the hierarchical regression analysis, the control variables, market growth and competitive intensity were entered in step 1, and other independent variables were entered in step 2 (Table 5-21).

Hypothesis 1a states that the effect of market knowledge breadth is greater than the effect of market knowledge depth on exploratory service innovation for new brand strategy users. The results presented in Table 5-17 indicate no significant effect from control variables on exploratory service innovation. Also these results indicate that market knowledge breadth has a greater effect on exploratory service innovation ($P < .05$, $\beta = 0.58$) than market knowledge depth has on exploratory service innovation ($P < .05$, $\beta = 0.49$).

Table 5-17 Hierarchical regression analysis - Effects of market knowledge breadth and depth on exploratory service innovation (Hypothesis 1a)

Predictor variables	Predicted variables	Model fit	Path Coefficient	t-value
<u>Main effect model:</u>				
Step 1: control variables	Exploratory service innovation	0.22		
Competitive intensity			0.09	0.98
Market growth			0.22	2.44
Step 2: independent variables	Exploratory service innovation	0.24		
Competitive intensity			0.07	0.83
Market growth			0.13	1.50
Market knowledge breadth			0.39	1.26
Market knowledge depth			0.45	3.21***
<u>Step 3: Interaction effect model:</u>				
		R ² = 0.31		
<u>when new brand strategy is run on the main effect:</u>				
Market knowledge breadth	Exploratory service innovation		0.58	6.25**
Market knowledge depth	Exploratory service innovation		0.49	3.66**

Significant level: ***P < .01, ** P < .05

Hypothesis 1b states that the effect of market knowledge depth is greater than the effect of knowledge breadth on exploitative service innovation for brand extension strategy users. The results presented in Table 5-18 indicate that competitive intensity has no significant effect on exploitative service innovation, but that market growth has a significant effect on exploitative service innovation. The results also show that market knowledge depth has a greater effect on exploitative service innovation ($P < .05$, $\beta=0.39$) than market knowledge breadth has on exploitative service innovation ($P < .05$, $\beta=0.37$). Hypothesis 1b is therefore supported.

Table 5-18 Hierarchical regression analysis - Effects of market knowledge breadth and depth on exploitative service innovation for brand extension strategy users (Hypothesis 1b)

Predictor variables	Predicted variables	Model fit	Path Coefficient	t-value
<u>Main effect model:</u>				
	Exploitative service innovation			
<i>Step 1: control variables</i>		0.32		
Competitive intensity			0.29	0.32
Market growth			0.33	3.69***
<i>Step 2: independent variables</i>		0.27		
Competitive intensity	Exploitative service innovation		0.01	0.15
Market growth			0.24	2.92***
Market knowledge breadth			0.08	0.74
Market knowledge depth			0.36	3.40***
<u>Interaction effect model:</u>				
when brand extension strategy run on the main effect:				
Market knowledge breadth	Exploitative service innovation		0.37	2.78**
Market knowledge depth	Exploitative service innovation		0.39	4.33**
		R ² = 0.39		

Significant level: ***P < .01, ** P < .05

Hypothesis 2a states that the effect of market orientation on market knowledge breadth is greater than the effect of market orientation on market knowledge depth for new brand strategy users. The results presented in Table 5-19 show that competitive intensity has no significant effect on either market knowledge depth or market knowledge breadth, but that market growth has a significant effect on both market knowledge depth and breadth. Also the results indicate that market orientation has a greater effect on market knowledge breadth ($P < .01$, $\beta=0.67$) than market orientation has on market knowledge depth ($P > .01$, $\beta=0.65$) for new brand strategy users. Hypothesis 2a is therefore supported.

Table 5-19 Hierarchical regression analysis- relationship between market knowledge breadth/ depth and market orientation for new brand strategy users (Hypotheses 2a, 2b)
Significant level: ***P < .01, *p< .1

Predictor Variable	Predicted variables	Model fit	Path Coefficient	t-value	Predicted variables	Model fit	Path Coefficient	t-value
<i>Main effect model:</i>								
<i>Step1: control variables</i>	Market knowledge breadth	0.24			Market knowledge depth	0.03		
Competitive intensity			0.08	0.94			0.02	0.29
Market growth			0.24	2.61***			0.18	1.97*
<i>Step 2: independent variables</i>	Market knowledge breadth	0.26			Market knowledge depth	0.32		
Competitive intensity			-0.01	-0.19			-0.09	-1.18
Market growth			0.13	1.53			0.05	0.65
Market orientation			0.47	5.64***			0.56	6.98** *
<i>Interaction effect model:</i>								
when new brand strategy run on the main effect:								
Market orientation	Market knowledge breadth	0.46	0.67	9.11***				
Market orientation	Market knowledge depth	0.45	0.65	7.40***				
<i>Interaction effect model:</i>								
when brand extension strategy run on the main effect:								
Market orientation	Market knowledge breadth	0.27	0.52	7.44***				
Market orientation	Market knowledge depth	0.29	0.54	7.56***				

Hypothesis 2b states that the effect of market orientation on market knowledge depth is greater than the effect of market orientation on market knowledge breadth for brand extension strategy users. The results presented in Table 5-20 show that market orientation has a greater effect on market knowledge depth ($P < .01$, $\beta=0.54$) than market orientation has on market knowledge breadth ($P < .01$, $\beta=0.52$). Hypothesis 2b is therefore supported.

Table 5-20 Hierarchical regression analysis - the effects of exploratory and exploitative service innovation on new service performance for new brand strategy and brand extension strategy users (Hypotheses 3,4a, 4b)

Predictor variables	Predicted variable	Model fit	Path Coefficient	t-value
<u>Main effect model:</u>				
<i>Step 1: control variables</i>	New Service performance	R ² = 0.37		
Competitive intensity			0.14	1.65*
Market growth			0.15	1.57
<i>Step 2: independent variables</i>				
	New Service performance	R ² = 0.37		
Competitive intensity			0.86	1.0
Market growth			0.27	0.3
Exploratory service innovation			0.17	1.56
Exploitative service innovation			0.09	0.88
Branding capability			0.28	3.03***
<u>Interaction effect model: when new brand strategy run on the main effect:</u>				
<i>Step 1: control variables</i>	New Service performance			
Competitive intensity			0.28	0.82
Market growth			0.21	1.31
		R ² = 0.10		
<i>Step 2: independent variables</i>	New Service performance			
Competitive intensity			0.25	0.89
Market growth			0.05	0.81
Exploratory service innovation			0.25	1.95*
Exploitative service innovation			0.15	1.21
Branding capability			0.20	1.96**
		R ² = 0.25		
<u>Interaction effect model: when brand extension strategy run on the main effect:</u>				
<i>Step 1: control variables</i>				
Competitive intensity			0.26	1.09
Market growth			0.20	0.96
		R ² = 0.11		
<i>Step 2: independent variables</i>				
Competitive intensity			-0.005	0.02
Market growth			0.10	0.64
Exploratory service innovation			0.08	0.56
Exploitative service innovation			0.06	0.34
Branding capability			0.43	2.86***

Significant level: * P < .10, **P < .05, ***P < .01

Hypothesis 3 states that the relationship between branding capability and new service performance is greater for new brand strategy users than brand extension strategy users. The results presented in Table 5-21 show no significant effect from market growth on new service performance but they do show a significant effect from competitive intensity on new service performance. The results also show that branding capability has greater β on new service performance for brand extension strategy users ($P < .01$, $\beta = 0.43$) than new brand strategy users ($P < .05$, $\beta = 0.20$). The Chow test was used to determine the significance of differences in the effects between two independent groups (new brand strategy users vs. brand extension strategy users). The Chow test is a statistical analysis of whether the coefficients in two linear regressions on different data sets are equal. The Chow test is often used to determine whether the independent variables have differing impacts on various subgroups of the population (Chow, 1960). The Chow test formula is shown in Table 5-22.

Table 5-21 Comparing the effect of branding capability on NSP in 2 groups of brand extension and new brand strategy users in

$$\text{Chow test} = \frac{(S_c - (S_1 + S_2)) / (k)}{(S_1 + S_2) / (N_1 + N_2 - 2k)} = 0.22 \quad \boxed{0.22 < 9.48}$$

$$F(k, n_1 + n_2 - 2k) = 9.48$$

Where:

S_c = the sum of squared residuals from the combined data = 117.81

S_1 = the sum of squared residuals from the first group = 70.68

S_2 = the sum of squared residuals from the second group = 46.68

N_1 = number of observations in group 1 = 60

N_2 = number of observations in group 2 = 63

K = Total number of parameters = 2

The Chow test statistic result is compared to an F-distribution having k and n_1+n_2-2k degrees of freedom. The results of the Chow test (Table 5-22 above) indicated that there is not any significant difference in the effects of branding capability on new service performance between new brand strategy users and brand extension strategy users. Hypothesis 3 is therefore not supported.

Hypothesis 4a states that the new brand strategy users achieve higher new service performance when they utilise greater exploratory service innovation than exploitative service innovation. The results presented in Table 5-21 above indicated that exploratory service innovation has a greater effect on new service performance ($P < .10$, $\beta=0.25$) than exploitative service innovation has on new service performance ($P > .10$, $\beta=0.15$) for new brand strategy users. Hypothesis 4a is therefore supported.

Hypothesis 4b states that the brand extension strategy users achieve higher new service performance when they utilise greater exploitative service innovation than exploratory service innovation. The results presented in Table 5-21 above indicated that there are no significant effects on new service performance by exploitative service innovation ($P > .10$, $\beta=0.08$) and exploratory service innovation ($P > .10$, $\beta=0.06$) for brand extension strategy users. Hypothesis 4b therefore is not supported.

5.6. Profile of Top Performance Service Firms

The principle managerial question that motivated this study is what should a service organisation look like with regard to the type of brand strategy it adopts, its service innovation, and its organisational resources and capabilities? To address these issues more fully, this study followed the lead of Olson, Slater and Hult (2005) and

Vorhies and Morgan's (2003) by identifying the top firms (on the basis mean score of new service performance), in each of the two categories of brand strategies. In this study, the firms with a mean score above 3.5 on new service performance were defined as top performing and firms with mean score less than 3.5 of new service performance were defined as low performing firms. The mean scores for exploratory and exploitative service innovations, market orientation, and branding capability, were then determined (see Table 5-23). Results indicated that the top-performing new brand strategy users are highly market oriented and use highly exploitative service innovation. Compared to brand extension strategy users, new brand strategy users have higher level of branding capability and market knowledge breadth, while having lower levels of market knowledge depth and market orientation.

Table 5-22 Profile of highest and lowest performing firms-mean scores (standard deviation)

Organisation variable	New brand strategy users		Brand extension strategy users	
	Low-performing	High-performing	Low-performing	High-performing
Exploratory service innovation	4.55 (1.0)	5.36 (.90)	4.53 (.67)	5.29 (1.03)
Exploitative service innovation	5.12 (1.0)	6.07 (.66)	5.50 (1.22)	6.05 (.66)
Branding capability	4.31 (1.58)	5.25 (1.06)	3.55 (1.98)	5.17 (1.05)
Market knowledge breadth	4.42 (1.05)	5.04 (.56)	4.62 (.56)	4.89 (.87)
Market knowledge depth	4.17 (1.47)	4.93 (.87)	4.18 (.23)	5.19 (1.22)
Market orientation	4.12 (1.17)	5.68 (.63)	3.90 (1.01)	5.71 (.90)

5.7. Summary of Results

As shown in Table 5-24, the findings indicate that Hypothesis 1a, 1b, 2a, 2b and 4a are supported and Hypothesis 3 and 4b are not supported.

Table 5-23 Summary of hypotheses results

Hypotheses		Result
H1a	The influence of market knowledge breadth is greater than the effect of market knowledge depth on exploratory service innovation for new brand strategy users.	Supported
H1b	The effect of market knowledge depth is greater than the effect of market knowledge breadth on exploitative service innovation for brand extension strategy users.	Supported
H2a	The effect of market orientation on market knowledge breadth is greater than the effect of market orientation on market knowledge depth for new brand strategy users.	Supported
H2b	The effect of market orientation on market knowledge depth is greater than the effect of market orientation on market knowledge breadth for brand extension strategy users.	Supported
H3	The relationship between branding capability and new service performance is greater for new brand strategy users than brand extension strategy users.	Not supported
H4a	The effect of exploratory service innovation is greater than the effect of exploitative service innovation on new service performance for new brand strategy users.	Supported
H4b	The effect of exploitative service innovation is greater than the effect of exploratory service innovation on new service performance for brand extension strategy users.	Not Supported

5.8. Conclusion

This chapter has presented the results from analysis of the data collected from 123 medium to large service firms across ten service sectors within Australia. It has described the preliminary data analysis, including the profile of the sample and descriptive statistic results. The sample profile showed that 60 service firms in the sample used new brand strategy for a particular new service and 63 service firms used brand extension strategy for a particular new service, in the past three years. This chapter also presented the measurement model and testing results, which were analysed using Smart-PLS software. These results will be used to determine findings for this study, which together with their theoretical and practical implications will be discussed in the next chapter.

Chapter 6 – DISCUSSION AND CONCLUSIONS

6.1. Introduction

The main objective of this study was to examine the role of branding in the relationships between exploratory and exploitative innovations, market knowledge depth and breadth, market orientation, branding capability and new service performance, within the context of the service sector. Building on an extensive review of the literature provided in Chapter 2, Chapter 3 presented the theoretical framework, formulated a number of potential relationships and developed hypotheses to be tested by means of detailed analysis of data obtained from an online survey of medium to large service firms operating in Australia. In Chapter 4, a sound research design plan was developed to link the hypotheses with empirical data. Chapter 5 presented the results of various data analyses undertaken for the study. Overall, Chapters 2 to 5 established a comprehensive base for the discussion provided in this final chapter, regarding the evaluation and interpretation of the results of this study, as well as the presentation of a number of significant theoretical and practical implications. As discussed in Section 1.3, four general research questions were posed at the outset of this study:

- *RQ1: To what extent does the interaction between a service firm's brand strategy (new brand and brand extension) and market knowledge (depth and breadth) contribute to its service innovation?*

- *RQ2: To what extent does a service firm's market orientation help it to acquire and develop market knowledge dimensions regarding brand strategy?*
- *RQ3. To what extent does the interaction between a service firm's branding capability and its brand strategy contribute to its new service performance?*
- *RQ4: To what extent does the interaction between a service firm's service innovation (exploratory and exploitative service innovations) and its brand strategy contribute to its new service performance?*

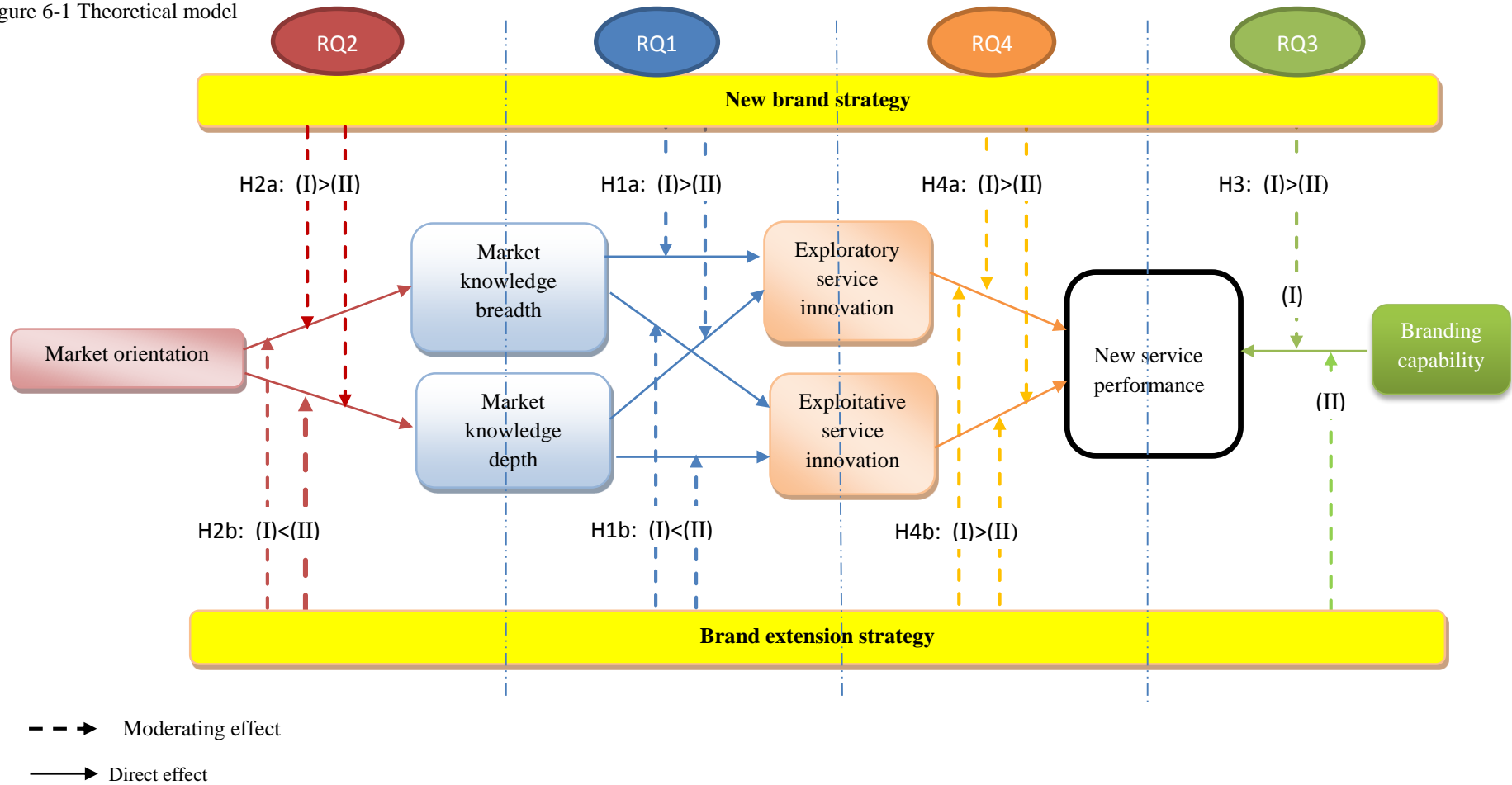
These questions were grounded in the review of scholarly literature on service innovation, service branding and organisational resources and capabilities offered in Chapter 2 and theory development offered in Chapter 3. To address these specific research questions, a theoretical framework incorporating seven hypotheses were developed in Chapter 3 (Figure 3-1). This chapter reports on the findings that can be determined from the data analysis results, focusing on the interpretation of the results that have been described in detail in Chapter 5.

Given the primary objectives of this study, emphasis will be placed on issues involving the role of brand strategies in the relationships between service innovation, market knowledge, market orientation, branding capability, and new service performance. Attention will also be given to the roles of exploratory and exploitative service innovations and branding capability in achieving higher new service performance for each type of brand strategy. Theoretical and practical implications drawn from the findings will be discussed, followed by the discussions of the limitations of the study and directions for future research.

6.2. Discussion of Results

A theoretical model which encompassed the focal constructs (presented in Figure 3-1 in Chapter 3) was developed to assist the discussion of the findings. The results are discussed in detail in this section to enable a more comprehensive appreciation of the findings. The colour-coded research model, which encapsulates the four research questions and the hypotheses tested in the course of this study, is presented in Figure 6-1 below. The blue shaded lines within the research model are associated with Research Question 1 - the moderating role of brand strategies on the relationship between market knowledge and service innovation, and their corresponding hypotheses (see the blue lines in Figure 6-1). The red shaded lines are associated with Research Question 2 - the moderating roles of brand strategies on the relationship between market orientation and market knowledge, and their corresponding hypotheses (see red lines in Figure 6-1). The green shaded lines are associated with Research Question 3 - the moderating role of brand strategies on the relationship between branding capability and new service performance, and its corresponding hypothesis (see the green lines in Figure 6-1). The orange shaded lines are associated with Research Question 4 - the moderating roles of brand strategies on the relationship between service innovation and new service performance, and their corresponding hypotheses.(see the orange lines in Figure 6-1).

Figure 6-1 Theoretical model



Source: developed for this study

6.2.1. Results for Research Question 1

RQ 1 asked: *To what extent do the interactions between a service firm's brand strategy (new brand and brand extension) and market knowledge (depth and breadth) contribute to its service innovation?*

The focus of Research Question 1 was an examination of the relationships between market knowledge depth and breadth and exploratory and exploitative service innovations based on brand strategy types. Hypothesis 1 was developed to provide the answer to Research Question 1. The following discussion is based on Hypothesis 1 in the theoretical model in Figure 6-1 (Blue).

Discussion of Hypothesis 1: Hypothesis 1a stated that the effect of market knowledge breadth is greater than the effect of market knowledge depth on exploratory service innovation for new brand strategy users.

The results of this study support Hypothesis 1a, demonstrating that the effect of market knowledge breadth ($\beta_{breadth} = 0.58, P_{breadth} < 0.01$) is greater than the effect of market knowledge depth ($\beta_{depth} = 0.49, P_{depth} < 0.01$) on exploratory service innovation for new brand strategy users (See Table 5-5).

This finding supports the argument proposed in Chapter 3 in that medium and large service firms in this study that have a new brand strategy and greater market knowledge breadth, employ greater exploratory service innovation than exploitative service innovation in launching a new service to the market. A high level of market knowledge depth is less helpful in deploying higher levels of exploratory service innovation for new brand strategy users. This study reasons that since the new brand strategy is an exploratory strategy (see Section 2.4.2) to introduce a new service to a new market, service firms with a greater market knowledge breadth of new markets are probably more successful in employing more exploratory service innovation.

Hypothesis 1b stated that the effect of market knowledge depth is greater than the effect of market knowledge breadth on exploitative service innovation for brand extension strategy users. The results of this study support Hypothesis 1b, demonstrating that market knowledge depth has a greater effect ($\beta_{depth} = 0.39$; $P_{depth} < 0.01$) than market knowledge breadth ($\beta_{breadth} = 0.37$, $P_{breadth} < 0.01$) on exploitative service innovation for brand extension strategy users (See Table 5-6).

This finding supports the argument made in Chapter 3 in that medium and large service firms in this study who adopted a brand extension strategy with a greater market knowledge depth, employ greater exploitative service innovation than exploratory service innovation. A high level of market knowledge breadth is less helpful for brand extension strategy users in the deployment of exploitative service innovation. This study reasons that since the brand extension strategy is an exploitative strategy (see Section 2.4.2) to introduce a new service to the current market, service firms with deeper market knowledge of their current market are probably more successful in employing more exploitative service innovation.

As discussed in Section 2.3.4, market knowledge is a fundamental source of service innovation. Previous studies have highlighted the important role of market knowledge in product and service innovation (e.g., Miller et al., 2007; Prabhu et al., 2005). Nonetheless, they have failed to address the effect of market knowledge breadth and depth on exploratory and exploitative innovations specifically within the service firm context. Prabhu et al. (2005) and Luca and Atuahene-Gima (2007) focus only on the relationship between market knowledge dimensions and innovation from a general perspective. This can be viewed as problematic as one

may wonder what type of service innovation (exploratory or exploitative) is the outcome of market knowledge depth and breadth within the services context.

The approach taken in this study also goes beyond studies by Prabhu et al. (2005), Luca, and Atuahene-Gima (2007) in that it has enabled further articulation of the moderating roles of brand strategies on the relationship between market knowledge dimensions and exploratory and exploitative innovations, specifically within the services context. Previous studies have not addressed the role of brand strategies in the relationship between market knowledge dimensions and exploratory and exploitative innovations in the services sector. This study advances earlier lines of inquiry and demonstrates that the effect of market knowledge breadth and depth on exploratory and exploitative service innovations critically depends on the type of brand strategy utilised by service firms.

In addressing Research Question 1, it is believed that a new brand strategy user with broad market knowledge is more capable of developing exploratory service innovation; while a brand extension strategy user with a deep market knowledge base is better able to achieve exploitative service innovation. The results of this study argue for the importance of fit between the market knowledge dimensions and the brand strategy adopted by a firm in achieving a specific service innovation. By extending previous studies (e.g., Prabhu et al., 2005; Luca & Atuahene-Gima, 2007), these findings provide a more nuanced understanding of how market knowledge depth and breadth, and brand strategies jointly affect exploratory and exploitative service innovations.

6.2.2. Results for Research Question 2

Research Question 2 asked: *To what extent does a service firm's market orientation culture help it to acquire and develop market knowledge dimensions regarding brand strategy?*

The focus of Research Question 2 was an examination of the relationships between market knowledge depth and breadth and market orientation culture based on brand strategy types. Hypothesis 2 was developed to provide answers to Research Question 2. The following discussion is based on Hypothesis 2 in the theoretical model in Figure 6-1, outlined in the red.

Discussion of Hypothesis 2:

As indicated in Section 3.2.2, Hypothesis 2a stated that the effect of market orientation culture on market knowledge breadth is greater than the effect of market orientation culture on market knowledge depth for new brand strategy users.

The results of this study support Hypothesis 2a, demonstrating that the effect of market orientation on market knowledge breadth ($\beta_{breadth} = 0.67, P_{breadth} < 0.01$) is greater than the effect of market orientation on market knowledge depth ($\beta_{depth} = 0.65; P_{depth} < 0.01$) for new brand strategy users (See Table 5-7).

This finding supports the argument proposed in Chapter 3 that market-oriented, medium and large service firms in this study that implement new brand strategy, have a greater market knowledge breadth than market knowledge depth. This study reasons that since the new brand strategy is about emphasising on new market opportunity and new customers, market-oriented firms need greater market knowledge breadth than market knowledge depth to understand a wide range of

diverse and potential customers and competitors (Kogut & Zander, 1993) when they implement a new brand strategy.

Hypothesis 2b stated that the effect of market orientation culture on market knowledge depth is greater than the effect of market orientation culture on market knowledge breadth for brand extension strategy users. The results of this study support Hypothesis 2b, demonstrating that market orientation culture has a greater effect on market knowledge depth ($\beta_{depth} = 0.54; P_{depth} < 0.01$) than market knowledge breadth ($\beta_{breadth} = 0.52, P_{breadth} < 0.01$) for brand extension strategy users (See Table 5-8).

In addressing Research Question 2, it is believed that market-oriented medium and large service firms implementing brand extension strategy have greater market knowledge depth than market knowledge breadth. The results and findings of this study argue for the notion that since the brand extension strategy is about emphasising on current market domains and needs of existing customers, market-oriented firms need deeper market knowledge to capture the horizontal dimension of the existing market and have the deep understanding of its market.

As discussed in Section 2.3.6, market orientation culture supports market knowledge and provides strong norms for it (Kohli & Jaworski, 1990; Day, 1994). However, despite the numerous studies on market orientation, scholars have yet to recognise the distinction of market orientation's effect on different market knowledge dimensions in respect to the brand strategy adopted by the service firm. Previous research has often looked at the relationship between market orientation and market knowledge at a macro-level and generally studied the effects of market

orientation on overall market knowledge without investigation the specific role of market knowledge depth and breadth, in the context of the service firm.

More importantly, this study has investigated the moderating role of brand strategies on the relationship between market orientation and market knowledge depth and breadth. This study has advanced earlier lines of inquiry by demonstrating that market-oriented service firms differ in the type of their market knowledge applied to the service innovation process depending on their chosen brand strategy.

In addressing Research Question 2, findings provided a more understanding of how market orientation supports specific market knowledge dimensions in implementing brand strategies.

6.2.3. Results for Research Question 3

RQ3 asked: To what extent does the interaction between a service firm's branding capability and its brand strategy contribute to its new service performance?

The focus of Research Question 3 was an examination of the relationships between branding capability and new service performance based on brand strategy types. Hypothesis 3 was developed to provide answers to Research Question 3. The following discussion is based on Hypothesis 3 in the theoretical model in Figure 6-1 outlined in green.

Discussion of Hypothesis 3:

Hypothesis 3 stated that the relationship between branding capability and new service performance is greater for new brand strategy users than brand extension strategy users. The results of this study did not support Hypothesis 3. Despite the arguments in Chapter 3 that new brand strategy users require greater branding capability to establish the new brand, the results showed that β of branding capability on new service performance is greater for brand extension strategy users ($\beta = 0.43, p < 0.01$) than new brand strategy users ($\beta = 0.20, P < 0.05$) (See Table 5-9).

Furthermore, the results of the Chow test, presented in Table 5-10 above, showed that there is no significant difference between these two groups in affecting branding capability on new service performance. These results did not support the argument made in Chapter 3 in that new brand strategy users need the greater branding capability to establish the brand.

As discussed in Section 2.3.5 branding capability plays a critical role in achieving marketing performance (e.g., Merrilees et al., 2011; Morgan et al., 2009; Vorhies et al., 2010; Hulland et al., 2007, O'Cass & Ngo, 2011). However, despite the numerous studies on branding capability, scholars are yet to fully explore the role of branding capability in new service performance in respect to different brand strategy types. Previous studies have investigated the relationship between branding capability and performance from a general perspective without pointing to any specific brand strategy. The findings of this study extend previous studies by investigating the moderating role of brand strategies in the relationship between branding capability and new service performance.

6.2.4. Results for Research Question 4

RQ4 asked: *To what extent do the interactions between a service firm's service innovation (exploratory and exploitative service innovations) and brand strategy contribute to its new service performance?*

The focus of Research Question 4 was an examination of the relationships between exploratory and exploitative service innovation and new service performance in respect to service firm's brand strategy. Hypothesis 4 was developed to provide answers to Research Question 4. The following discussion is based on Hypothesis 4 in the theoretical model in Figure 6-1, outlined in the orange.

Discussion of Hypothesis 4:

Hypothesis 4a stated that the effect of exploratory service innovation on new service performance is greater than the effect of exploitative service innovation for new brand strategy users. The results of this study support Hypothesis 4a, demonstrating that new brand strategy users achieve high new service performance when they utilise greater exploratory service innovation ($\beta = 0.25, P < 0.10$) than exploitative service innovation ($\beta = 0.15, P < 0.10$) (See Table 5-9).

This finding supports the argument proposed in Chapter 3 that medium and large service firms implementing a new brand strategy achieve greater new service performance when they concentrate on exploratory service innovation than exploitative service innovation. A high level of exploitative service innovation is less helpful in achieving superiority in new service performance for new brand strategy users. This study reasons that since the new brand strategy is an exploratory strategy to introduce a new service to the new market, service firms with exploratory service innovation are more successful to meet the needs of new customers and emerging markets and thus achieving higher performance.

Hypothesis 4b stated that the effect of exploitative service innovation is greater than the effect of exploratory service innovation on new service performance for brand extension strategy users. The results of this study do not support Hypothesis 4b as the effect of exploratory service innovation ($\beta = 0.34, p < 0.05$) on new service performance was greater than the effect of exploitative service innovation on new service performance ($\beta = 0.07, p > 0.10$) for brand extension strategy users.

Therefore, like new brand strategy users, brand extension strategy users benefit more from exploratory service innovation than exploitative service innovation in achieving higher new service performance. As discussed in Section 2.2.2, exploratory and exploitative service innovations have been used to explain how some firms outperform others (Cao et al., 2009; He & Wong, 2004; March, 1991; Jansen et al., 2006). The approach taken in this study goes beyond what has been undertaken previously in respect to researching branding innovation by further articulating the roles of brand strategies in the context of service firms. The results of this study are in line with the proposition that exploratory and exploitative service innovations play significant roles to enable service firms to achieve superior performance, as documented by previous scholars (e.g., Cao et al., 2009; Jansen et al., 2006). Nevertheless, scholars have yet to consider the potentials for relationships between exploratory and exploitative service innovations and brand strategy types. The current study has endeavoured to break new ground by conceptually and empirically examining the effect of exploratory and exploitative service innovations on new service performance with respect to brand strategies. As discussed in Section 3.2.4, this study takes the view that a proper fit between

the type of service innovation and type of brand strategy adopted by the firm will lead to superior new service performance.

Although this study found no support for Hypothesis 4b, results indicated that medium and large service firms possessing a higher level of exploratory service innovation than exploitative service innovation achieve high new service performance whether they use new brand strategy or brand extension strategy. The results also suggested that a higher level of exploitative service innovation cannot lead to superior new service performance in the competitive service industry.

6.3. Implications

The key findings of this study highlight the potential for further critical investigation into the role of branding - including the complex relationships between exploratory and exploitative service innovations, branding capability, market knowledge depth and breadth, market orientation and new service performance – within the particular context of the services sector. The findings of this research enhance our understanding of the role of service branding, service innovation, market orientation, market knowledge dimensions and branding capability in the new service development domain, as well as contributing to knowledge in the areas of strategic marketing, strategic management, and service branding. As such, a number of theoretical and practical implications deserve acknowledgement and discussion.

6.3.1. Theoretical implications

This study contributes to marketing theory of service innovation in four main ways. *First*, the findings of this study suggest that while the conventional approach of scholars, adopting a customer perspective to examine the roles of brand strategies in organisation, has merit - e.g., Ambler & Styles, 1996; Nkwocha et al., 2005 - the perspective of the firm can also provide valuable insight. To fully explain the roles of brand strategies in new service performance, relationships with organisational factors such as service innovation, resources and capabilities need to be further investigated. By adopting a more inclusive approach to study service branding and service innovation, scholars may achieve a more accurate and comprehensive insight into innovation and branding theories from the service firm perspective.

Second, scholars building on the knowledge base theory to explain service innovation often link overall market knowledge to overall service innovation. The results of this study suggests that this approach cannot analyse the full value of market knowledge and service innovation. The various market knowledge dimensions contribute differently to service innovation types depending on which type of brand strategy is in play. This study argues that to fully capture the contributions of market knowledge dimensions to service innovation types and performance, scholars will need to undertake further, more detailed and broadly based studies on the effects of market knowledge dimensions on service innovation types with respect to specific brand strategy type. By doing so, scholars may be able to explain more accurately the extents to which market knowledge dimensions contribute to service innovation, relative to the choice of brand strategy. This would expand the contribution of scholarly literature in this field and may well modify the significance that marketing theory places on understanding the moderating role

of brand strategies in collecting and using market knowledge in achieving service innovation.

Third, the theoretical and empirical findings of this study suggest that while scholarly consideration for the roles of market orientation as predictor of market knowledge has merit, this approach may be significantly enhanced if brand strategies are introduced into the model. This study suggests that to fully contribute to both theoretical and empirical understandings of the effect of market orientation on market knowledge dimensions, serious consideration must be given to the moderating role of brand strategy in this relationship. This implies that by failing to consider the moderating role of brand strategies, studies may be taking an overly optimistic view of the importance effect of market orientation on market knowledge dimensions.

Fourth, studies using service innovation to explain performance differentials often link exploratory and exploitative service innovations to performance generally. The results of this study suggest that involving the role of brand strategies as moderator of the relationship between service innovation and new service performance could increase scholarly insight in service innovation and service branding theories. The results regarding the role of brand strategy types suggest that theoretical investigation of the failure of service firms in new service development should not necessarily (or primarily) be ascribed to their failure achieve a proper fit between the type of service innovation to brand strategy. Rather, it may be possible for service firms to fail if they do not have exploratory service innovation in their new service development, whether they are brand extension or new brand strategy users.

This study provides a snapshot of the interconnections between service innovation, market knowledge, market orientation and branding in the service context, within developed economies, particularly in Australia. This study also responds to the call for greater attention to the management and performance of new services and service branding in developed economies.

6.3.2. Practical implications

The profile of the study sample indicated that, in practice, high performing brand extension strategy users and high performing new brand strategy users consistently deploy more branding capability than low performing firms, suggesting the important role of branding capability on new service performance. The findings of this study indicate that, in the highly competitive service industries of developed economies, service firms, regardless of the brand strategy they adopt, need to develop branding capability - by protecting the brand identity in an ongoing interaction with target customers - in order to achieve lasting competitive advantages. Accordingly, managers would be well advised to focus on developing branding capability when launching new services. One example of developing branding capability to optimise performance in launching new services would be continuing communication with target customers - such as attending or becoming a sponsor in networking groups, or via local business functions, awards ceremonies, charities or sport events.

Although the profile of the study sample population demonstrated that in practice high performing brand extension strategy users are more likely to use exploitative service innovation than exploratory service innovation, the results also suggest that there is no significant relationship between exploitative service

innovation and new service performance for brand extension strategy users. Therefore, based on these findings managers would be well advised to avoid allocating high levels of resources to exploitative service innovation, such as reinforcing existing processes and structures when they are using brand extension strategy to launch new services. The results also indicate that in highly innovative service industries within developed economies, brand extension strategy users would be advised to deploy exploratory service innovation to successfully compete in such a competitive market. This study confirms the work of Auh and Menguc (2005) which argue that in an environment of increasing competition, exploitative activities will not be sufficient for service firms to achieve superior performance. High levels of competition seem to invite service firms to deploy more exploratory activities, even when they use an exploitative strategy such as brand extension strategy. Thus, increased competition calls for brand extension strategy users to offer new designs, create new markets and develop new channels of distribution, such as online channels, to meet the needs of new customers, and investing resources in exploratory service innovation is likely to contribute to greater new service performance.

The results of this study, indicate that service firms using new brand strategy tend to possess a high level of market knowledge breadth and deploy a higher exploratory service innovation. Furthermore, market knowledge breadth is more helpful in deploying exploratory service innovation for new brand strategy users, and exploratory service innovation has greater effect on new service performance. Accordingly, based on the results of this study managers would be well advised to develop broad market knowledge in a variety of domains, including competitor strategies and customer needs and behaviours, across various segments, and to

offer new services through innovative distribution channels when they implement a new brand strategy.

The argument for the notion that market knowledge enhances service innovation has been widely accepted by practitioners. This study supports this conclusion, but also makes it more practical for managers in two ways. First, this study calls on managers to consider the attributes of their market knowledge and its relevance to their new service projects and their chosen brand strategy. Marketing managers have long been committed to using market knowledge depth and/or breadth in deploying their exploratory and exploitative service innovations. However, this study has found evidence that although market knowledge is important in deploying service innovation, attention must be paid to the specific market knowledge dimensions and their fit with brand strategy types. The type of brand strategy chosen for a service implementation project appears to influence the effect of market knowledge dimensions on service innovations. Thus, a new insight for marketing management is that developing market knowledge in a variety of domains is inherently valuable to the deployment of exploratory innovation for new brand strategy users. On the other hand developing technical and deep market knowledge about customers and competitors is more valuable for brand extension strategy users when deploying exploitative service innovation, such as reinforcing existing processes and structures, in launching the new services. Marketing management would therefore be well advised to allocate new service project teams with the necessary human and financial resources to acquire and apply broad and deep knowledge depending on the brand strategy that has been adopted for the new service project.

The results of this study also suggest that it is the proper alignment between brand strategies, market knowledge dimensions and service innovation types that will enable the translation of market knowledge into better service innovation. This means that managers who encourage market knowledge, but neglect this important fitting process may not achieve their intended objectives in service innovation.

Furthermore, the results of this study provide insights for enabling owners and managers of service firms to focus their organisational marketing culture, values and norms on the collection and use of appropriate market knowledge with respect to their type of brand strategy. The results of this study give insight to managers implementing successful brand strategies in developed economies such as Australia, as well as countries such as Germany, Canada, and the United Kingdom (World Economic forum 2011-2012), where medium and large service firms contribute significantly to Gross National Product. Owners and managers of service firms should be aware that due to increasing competition in the service industry, medium and large service firms operating in developed economies such as Australia are no different in some respects to manufacturing firms and other industries that also face major challenges.

As such, it is imperative that medium and large service firms that seek to achieve superior service performance must hold specific organisation service innovation and market knowledge with respect to their brand strategy. Further, managers of medium and large service firms in developed economies such as Australia not only need to seek high levels of market knowledge and service innovation, they need to deploy the appropriate type of market knowledge and service innovation with respect to their brand strategy type.

Finally, the results of this study suggest that owners and managers of medium and large service firms, particularly those in developed economies, would do well to focus on exploratory activities such as new designs and create new markets - rather than exploitative service innovation – in order to achieve superior long-term performance (including customer retention, customer satisfaction, and growth in their sales and customer base).

6.4. Limitations and further research

Due to its scope and resources, this study had subject to a number of limitations. *First*, any research project that uses an online-based survey and multiple variables is open to the possibility of measurement error. However, every endeavour has been made to reduce measurement error by confirming the reliability and validity of all the studied constructs. *Second*, a cross-sectional research design does not offer the same insight into the complexities of the relationships between service innovation, market knowledge, market orientation, branding capability, brand strategies and performance outcomes, as would a longitudinal research study. *Third*, due to the limited budget, limited time, and the predictably low survey participation rate, the final sample size was small.

All things considered, future research utilising longitudinal data to assess a range of service innovation projects for each respondent firm could well uncover more of the complexities these relationships. Additionally, the sample of this study was restricted to medium and large service firms in Australia. Although developed economies may have some mutual structures in their markets, they diverge in the periods of their economic progress. Future research may compare these findings with the experiences of medium and large service firms in other developed

economies or emerging economies, in order to strengthen the validity of the model advanced in this study.

Finally, the results of this study are limited to the opinions of a single manager from each firm and the experiences and performance outcomes from one new service project. Future research may expand the performance measures by including objective data, in areas such as the number of new customers, and by collecting opinions from a broader range of firm management as well as from customers, in relation to customer satisfaction, retention, and so forth.

These limitations have been presented in order to acknowledge their existence and to offer prospects for future research; however, they do not represent a risk or limit the validity of the findings of this study.

6.5. Conclusion

The theoretical model of this study postulates the notion that, depending on the brand strategy in use, either market knowledge breadth or market knowledge depth will enable medium and large service firms, in developed economies, to develop the high level of service innovation necessary for achieving superior new service performance. It also postulates that new service performance is largely driven by branding capability and brand strategy types bring a further dimension to these relationships. The empirical findings of this study validate this model.

By theorising and confirming this model, this study makes a key contribution to the theory and practice in the areas of strategic marketing, strategic management, and service branding. From a theoretical perspective, the model of this research provides new insights into the service innovation and the service branding

literature. Within the research into marketing and innovation, there has been limited interest in modelling branding or explaining the relationships between innovation, knowledge, and new offering performance within the context of services, and the ways in which market knowledge and brand strategy combinations contribute differently to innovation outcomes. This study is among the first to attempt to conceptually and empirically model service innovation, resources and capabilities, along with brand strategies in order to explain new service performance.

Until now, service branding has focused exclusively on external resources and customer perspectives, however this approach may inhibit scholarly endeavour from fully understanding why some firms outperform others. This is because, as the findings of this study suggest, firms may need to develop and deploy particular internal innovation, resources and capabilities in order to optimise new service success depending their choice of brand strategy. Branding capability may also be critical to the achievement of superior new service performance. Therefore, modelling and correlating service innovation, organisational resources and capabilities with service branding is significant in order to explain how some firms outperform others. This study has extended our understanding of the role of internal resources - such as market knowledge and market orientation - and capabilities such as branding capability, by considering the notion of how these factors interact with brand strategies in the context of new service development.

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APPENDIXE

SURVEY OF STUDY



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Note: Please read the information sheet before reading and completing this survey

We realise you are very busy, but ask for about 15 minutes of your time. Please do not rush, as your knowledge is very important and your accurate responses ensure your time is well served.

- Please circle the number **from 1 to 7** in statement below that best reflects your view. (1= Not at all, 2= Not very much, 3= Slightly, 4=Moderately, 5= Quite a lot, 6= Very much so, 7= Extensively) to which

	Not at						Very
	All						much
							so
KA. To which extent you believe that you are knowledgeable about your firms' business operations, strategies, business processes, performance, and business environment.	1	2	3	4	5	6	7

- The following statements refer to specific information about your firm. Think about your own understanding and knowledge of your firms' strategies and business operations. Please circle the number **from 1 to 7** in each statement that best reflects your views.

In relation to existing organisational processes, I would say in this firm:		Strongly disagree							Strongly agree
ICI1.	We frequently refine the provision of existing services.	1	2	3	4	5	6	7	
ICI2.	We regularly implement small adaptations to existing services.	1	2	3	4	5	6	7	
ICI3.	We introduce improvement in our existing services for our local market.	1	2	3	4	5	6	7	
ICI4.	We improve the efficiency of current services.	1	2	3	4	5	6	7	
ICI5.	We increase economies of scale in existing services.	1	2	3	4	5	6	7	
ICI6.	We expand services for existing clients.	1	2	3	4	5	6	7	
ICI7.	Lowering costs of internal processes is an important objective.	1	2	3	4	5	6	7	

In relation to new organisational processes, I would say in this firm:		Strongly disagree							Strongly agree
ICR1.	We accept demands that go beyond existing services.	1	2	3	4	5	6	7	
ICR2.	We invent new services.	1	2	3	4	5	6	7	
ICR3.	We experiment with new services in our local market.	1	2	3	4	5	6	7	
ICR4.	We commercialize services that are completely new to our firm.	1	2	3	4	5	6	7	
ICR5.	We frequently utilize new opportunities in new markets.	1	2	3	4	5	6	7	
ICR6.	We regularly use new distribution channels.	1	2	3	4	5	6	7	
ICR7.	We regularly search for and approach new clients in new markets.	1	2	3	4	5	6	7	

In relation to our business philosophy towards market , I would say :		Strongly disagree							Strongly agree
MOC1	Our business objectives are driven primarily by customer satisfaction.	1	2	3	4	5	6	7	
MOC2	Our strategies are driven by beliefs about how we can create greater value for customers.	1	2	3	4	5	6	7	
MOC3	We emphasize constant commitment to serving customer needs.	1	2	3	4	5	6	7	
MOC4	We regularly share information concerning competitors' strategies.	1	2	3	4	5	6	7	
MOC5	We emphasize the fast response to competitive actions that threaten us.	1	2	3	4	5	6	7	
MOC6	We regularly communicate information on customer needs across all business functions.	1	2	3	4	5	6	7	
MOC7	We frequently discuss market trends across all business functions.	1	2	3	4	5	6	7	
MOC8	All of our business functions are integrated in serving the needs of our target markets.	1	2	3	4	5	6	7	

Rate the degree to which each of these statements describes your principal industry over the last three years:		Strongly disagree							Strongly agree
ET1	The technology environment was very complex.	1	2	3	4	5	6	7	
ET 2	Predicting the actions of competitors was extremely difficult.	1	2	3	4	5	6	7	
ET 3	Customers' needs were highly unpredictable	1	2	3	4	5	6	7	
ET 4	Technological changes were very unpredictable.	1	2	3	4	5	6	7	
ET 5	The market environment was very dynamic.	1	2	3	4	5	6	7	
ET 6	The market environment was highly competitive.	1	2	3	4	5	6	7	

In relation to Competitive Intensity in our market , I would say :		Strongly disagree							Strongly agree
CI1	Competition in our market is cut-throat.	1	2	3	4	5	6	7	
CI2	There are many promotion wars in our market.	1	2	3	4	5	6	7	
CI3	Anything that one competitor can offer others can match easily.	1	2	3	4	5	6	7	
CI4	Price competition is a hallmark of our market.	1	2	3	4	5	6	7	

In relation to the market growth in our industry, I would say that:		Strongly disagree							Strongly agree
MG1	The growth rate of this industry in the past three years is very high.	1	2	3	4	5	6	7	
MG 2	The market demand in this industry is growing rapidly.	1	2	3	4	5	6	7	
MG 3	There are many potential customers in this industry to provide mass-marketing opportunity.	1	2	3	4	5	6	7	

Please indicate how your marketing organization performs the following activities with your brands in comparison with your main competitors.		much worse							much better
BC13	Routinely use customer insight to identify valuable brand positioning.	1	2	3	4	5	6	7	
BC14	Consistently establish desired brand associations in consumers' minds.	1	2	3	4	5	6	7	
BC15	Maintain a positive brand image relative to competitors.	1	2	3	4	5	6	7	
BC16	Achieve high levels of brand awareness in the market on a regular basis.	1	2	3	4	5	6	7	
BC17	Systematically leverage customer-based brand equity into preferential channel positions.	1	2	3	4	5	6	7	

- The following statements refer to *information about your firm's market knowledge compared to competitors*. In each statements please tick just 1 item in the right side which best describe your firm's market knowledge compared to major competitors.

In relation to our firm's market knowledge, I would say, compared to major competitors:		narrow						Broad
MB1	our firm's knowledge of competitors' strategies are	1	2	3	4	5	6	7
MB3	our firm's knowledge of our customers are	1	2	3	4	5	6	7

compared to major competitors:		limited						Wide ranging
MB2	our firm's knowledge of competitors' strategies are	1	2	3	4	5	6	7
MB4	our firm's knowledge of our customers are	1	2	3	4	5	6	7

compared to major competitors:		speciali zed						General
MB5	our firm's knowledge of competitors' strategies are	1	2	3	4	5	6	7
MB6	our firm's knowledge of our customers are	1	2	3	4	5	6	7

compared to major competitors:		shallow						deep
MD1	our firm's knowledge of competitors' strategies are	1	2	3	4	5	6	7
MD3	our firm's knowledge of this firm's customers are	1	2	3	4	5	6	7

compared to major competitors:		basic						advanced
MD2	our firm's knowledge of competitors' strategies are	1	2	3	4	5	6	7
MD4	our firm's knowledge of this firm's customers are	1	2	3	4	5	6	7

Box A:

SNA: Please identify one service with its brand name that your firm has launched within the previous 3 years (2009-2011) in the market.

Service and its brand name:

BSA. Did your firm launch above new service under a new brand name or under a previous brand name?

Under a new brand name ☐

Under a previous brand name ☐

- The following statements relate to the specific new service identified by you in the box A. Think about your own understanding and knowledge of this new service's performance. Please circle the number **from 1 to 7** in each statement that best reflects your views.

this new service (indicated in box A) has been effected by increasing:		Not at all						Very much so
MPA1	Customer satisfaction.	1	2	3	4	5	6	7
MPA2	Customer retention.	1	2	3	4	5	6	7
MPA3	The amount of new customers.	1	2	3	4	5	6	7
MPA4	Firm competitive position in the market place.	1	2	3	4	5	6	7

- Please answer questions below about your experience:

Please indicate the extent to which you agree or disagree with the statement below:		Strongly disagree						Strongly agree
KCA	I am confident I had the necessary knowledge to complete the statements asked throughout the survey.	1	2	3	4	5	6	7

NE. How many employees are there in this organization?

MA: What is the main activity of this service organisation?.....

MPA. What is your current position in this organization?

LPA. How long have you worked in your current position in this organization?

LOA. How long have you worked in this organization generally?

LIA. How long have you worked in this industry?

		Not at all knowledgeable						Extremely knowledgeable
DKA	How much is the degree of your knowledge in service development issues in this firm?	1	2	3	4	5	6	7
		Not at all involved						Extremely involved
LIA	What is the level of your involvement in the new service development issues in this firm?	1	2	3	4	5	6	7

Thanks a lot for your time to complete this survey